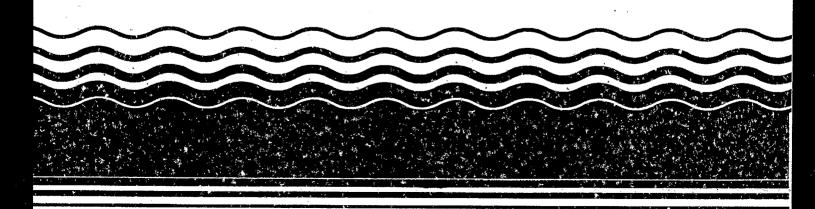
Superfund



# Progress Toward Implementing Superfund

Fiscal Year 1995

**Report to Congress** 



# Progress Toward Implementing SUPERFUND

Fiscal Year 1995

## REPORT TO CONGRESS

Required by
Section 301(h) of the
Comprehensive Environmental Response,
Compensation and Liability Act (CERCLA) of 1980,
as amended by the Superfund Amendments and
Reauthorization Act (SARA) of 1986

## **Notice**

This Report to Congress has been subjected to the U.S. Environmental Protection Agency's (EPA's) review process and approved for publication as an EPA document. For further information about this Report, contact the Office of Planning Analysis and Resource Management, Office of Emergency and Remedial Response at (703) 603-8770. Individual copies of the Report can be obtained from the U.S. Department of Commerce, National Technical Information Service (NTIS) by writing to NTIS, 5285 Port Royal Road, Springfield, VA 22161, or calling (703) 605-6000.

## **Foreword**

The U.S. Environmental Protection Agency (EPA) continued its progress in protecting public health, welfare, and the environment through the Superfund program in fiscal year 1995 (FY95). As the Superfund program completed its fifteenth year, the Agency had begun work at 95 percent of the 1,374 sites on the National Priorities List (NPL), and completed construction on 346 of them. EPA is pleased to submit this Report documenting the fiscal year's achievements. Through administrative improvements implemented during the year, the Agency accelerated the pace of cleanup, enhanced the fairness of the Superfund program, reduced transaction costs, and expanded public involvement.

Section 301(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), as amended by the Superfund Amendments and Reauthorization Act of 1986, requires the Agency to report annually on response activities and accomplishments and to compare remedial and enforcement activities with those undertaken in previous fiscal years. During the fiscal year, the Agency or potentially responsible parties (PRPs) started approximately 30 remedial investigation/feasibility studies, 84 remedial designs (RDs), and 110 remedial actions (RAs). PRPs began 71 percent of the RDs and 84 percent of the RAs. Continuing its successful efforts to compel PRPs to undertake cleanup, EPA entered into enforcement agreements worth more than \$1.6 billion in settlements and response work. The Agency and PRPs have also now undertaken more than 3,971 removal actions, including approximately 311 during FY95. Federal facility accomplishments have shown dramatic increases. EPA also continued to encourage public involvement in the Superfund process, to enhance partnerships with states and Indian tribes, and to encourage the use and development of treatment technologies. These three aspects of the program were highlighted in the Agency's administrative improvement initiative.

In addition to providing an overall perspective on progress in the past fiscal year, this Report contains the information Congress specifically requested in Section 301(h) of CERCLA, including a report on the status of remedial actions and enforcement activity in progress at the end of the fiscal year and an evaluation of newly developed feasible and achievable treatment technologies. The Report also includes a description of current minority firm participation in Superfund contracts and EPA's efforts to encourage increased participation, as required by Section 105(f). The Report fulfills the requirement of Section 301(h)(1)(E) by providing an update on progress being made at sites subject to review under Section 121(c). This Report also satisfies certain reporting requirements of CERCLA Section 120(e)(5), the EPA Annual Report to Congress: Progress Toward

## Foreword (continued)

Implementing CERCLA at EPA Facilities as Required by CERCLA Section 120(e)(5). The EPA Inspector General's report on the reasonableness and accuracy of the information in this Report, as required by CERCLA Section 301(h)(2), is included as Appendix D.

Carol M. Browner

Administrator

Fimothy Fields, Jr.

Acting Assistant Administrator for Solid Waste and Emergency Response

## **Acknowledgments**

The U.S. Environmental Protection Agency appreciates the contributions made by staff members throughout the Agency's management and program offices, as well as other federal agencies and departments. Within the Office of Solid Waste and Emergency Response, which manages the Superfund program, contributors included: Sharon Hallinan (project manager), Karl Alvarez, Erin Conley, Roger Hoogerheide, David Reynolds, Robin Richardson, Stuart Walker and Ed Ziomkoski from the Office of Planning Analysis and Resource Management; Jackie Tenusak from OSWER; Elaine Davies and John Smith from the OERR Immediate Office; Carol Bass and Art Johnson from the Region 1/9 Center; Carolyn Kenmore from the Region 4/10 Center; Lois Gartner from the Community Involvement and Outreach Center; Randy Hippen of the State Tribal and Site Identification Center; Joseph Lafornara and Bruce Potoka from the Environmental Response Center; and Lisa Tychsen and Renee Wynn from the Federal Facilities Restoration and Reuse Office.

Additional key contributions from other Environmental Protection Agency offices were provided by: Lance Elson from the Office of Enforcement and Compliance Assurance's (OECA's) Federal Facilities Enforcement Office; Scott Blair from OECA's Office of Site Remediation; Linda Fiedler, from the Technology Innovation Office; and Becky Neer, from the Office of Small and Disadvantaged Business Utilization.

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## **Acronyms**

ABA American Bar Association
ADR Alternative Dispute Resolution
AOC Administrative Order on Consent

ARAR Applicable or Relevant and Appropriate Requirement

BCT BRAC Cleanup Team

BRAC Base Realignment And Closure Act

CA Cooperative Agreement
CAG Community Advisory Group

CD Consent Decree

CEC CERCLA Education Center

CERCLA Comprehensive Environmental Response Cleanup and Liability Act

CERCLIS CERCLA Information System

CERT Center for Ecological Research and Training

CLU-IN Cleanup Information

CPCA Core Program Cooperative Agreement

CPR Center for Public Resources

DERTF Defense Environmental Restoration Task Force

DNAPL Dense Nonaqueous Phase Liquid

DoD Department of Defense
DOE Department of Energy
DOI Department of Interior
DOJ Department of Justice

EPA Environmental Protection Agency
ERT Environmental Response Team
FFA Federal Facilities Agreement

FFEO Federal Facilities Enforcement Office

FFERDC Federal Facilities Environmental Restoration Dialogue Committee

FFRRO Federal Facilities Restoration and Reuse Office

FS Feasibility Study

FUDS Formerly Use Defense Sites
GET Genesis Environmental Team

GWRTAC Ground-Water Remediation Technologies Analysis Center

HEAST Health Effects Assessment Summary Tables

HRS Hazard Ranking System

HSRC Hazardous Substance Research Center

IAG Interagency Agreement

INSS Information Network for Superfund Settlements

LSW Lead Sites Workgroup

MBE Minority Business Enterprise

NAMC National Association of Minority Contractors

NCP National Oil and Hazardous Substances Pollution Contingency Plan

NFRAP No Further Remedial Action Planned NORM Naturally Occurring Radioactive Materials

NPDES National Pollutant Discharge Elimination System'

## Acronyms (continued)

NPL National Priorities List
NRC National Response Center
NRT National Response Team

NTCR Non-Time-Critical Removal Action
NTIS National Technical Information Service

OECA Office of Enforcement and Compliance Assurance
OERR Office of Emergency and Remedial Response

OLM Outyear Liability Model
O&M Operation and Maintenance

ORD Office of Research and Development
ORIA Office of Radiation and Indoor Air

OSC On-Scene Coordinator

OSDBU Office of Small and Disadvantaged Business Utilization

OSRE Office of Site Remediation Enforcement

OSWER Office of Solid Waste and Emergency Response

PA Preliminary Assessment
POLREPs Pollution Reports

PPA Prospective Purchaser Agreement
PRP Potentially Responsible Party

RA Remedial Action

RAB Restoration Advisory Board

RAGS Risk Assessment Guidance for Superfund RCRA Resource Conservation and Recovery Act

RD Remedial Design

RD/RA Remedial Design/Remedial Action
RI/FS Remedial Investigation/Feasibility Study

ROD Record of Decision RPM Remedial Project Manager RQ Reportable Quantity

RREL Risk Reduction Engineering Laboratory
RTDF Remedial Technologies Development Forum
SACA Support Agency Cooperative Agreement
SACM Superfund Accelerated Cleanup Model

SARA 1986 Superfund Amendments and Reauthorization Act

SEP Supplemental Environmental Project

SHEMP Safety, Health, and Environmental Management Program

SI Site Inspection

SIP Site Inspection Prioritization

SITE Superfund Innovative Technology Evaluation

SNAP Superfund NPL Assessment Program

SPIDR Society of Professionals in Dispute Resolution

SRO Superfund Revitalization Office SRP Superfund Removal Procedures

## Acronyms (continued)

SSC Superfund State Contract SSL Soil Screening Levels

START Superfund Technical Assistance Response Team

TAG Technical Assistance Grant
TIO Technology Innovation Office
TSC Technical Support Center
UAO Unilateral Administrative Order

VISITT Vendor Information System for Innovative Treatment Technologies

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## **Executive Summary**

As the Superfund program entered its fifteenth year in December 1994, the U.S. Environmental Protection Agency (EPA or the "Agency") continued to fulfill the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) for protecting public health, welfare, and the environment. CERCLA requires that EPA update Congress each year on progress in the Superfund program. This Report fulfills the requirement.

EPA is committed to accelerating the pace of hazardous waste site cleanup. As part of this commitment, the Agency completed construction activities to place 68 National Priorities List (NPL) sites in the construction completion category during fiscal year 1995 (FY95). By the end of the fiscal year, work had occurred at more than 95 percent of the 1,374 sites proposed to, listed on, or deleted from the NPL, including a total of 346 sites (25 percent) that have achieved construction completion. Leaving a total of 1,236 sites currently listed on the NPL for FY95. Reflecting the Agency's increasing emphasis on completing site cleanups, more than 80 percent of the construction completions have been achieved in the past four years.

The Agency also continued its successful efforts to encourage potentially responsible parties (PRPs) to undertake and finance cleanup efforts at Superfund sites. PRPs were leading more than 75 percent of remedial designs (RDs) and remedial actions (RAs) started during the fiscal year. Since the inception of the Superfund program, EPA has reached agreements worth more than \$11 billion for

PRP response work at Superfund sites, including \$1.4 billion achieved this year.

This Report summarizes Superfund FY95 progress, highlighting accomplishments and initiatives to improve the program. Exhibit ES-1 presents a summary of FY95 accomplishments: Exhibit ES-2 provides a comparison of FY95 accomplishments with those of previous years and presents cumulative program accomplishments. FY95 accomplishments reflect the Agency's commitment to, and focus of resources on, activities required to complete site cleanups.

#### **Site Evaluation Progress**

EPA continued its progress in identifying and assessing newly discovered sites. At the end of FY95, there were 39,000 sites identified in the CERCLA Information System, the Superfund inventory of potentially hazardous waste sites. EPA had evaluated more than 95 percent of these sites for potential threats. The assessment activities included 36,913 preliminary assessments and 17,584 site inspections. Based on these evaluations, EPA has determined that 1,374 of the sites should be proposed to, listed on, or deleted from the NPL. For a total of 1,232 remaining on the NPL for FY95. These sites include nine proposed to, 30 listed on, and 25 deleted from the NPL during FY95. To date, a total of 88 sites have been deleted from the NPL.

## **Emergency Response Progress**

To protect human health and the environment from immediate or near-term threats, the Agency and PRPs started nearly 311 removal actions and completed 298 during FY95. More than 3,971

**Exhibit ES-1** Summary of Fiscal Year 1995 Superfund Activities

Percentage of National Priorities List Sites Where Work Has Begun Sites Classified as Construction Completions as of September 30, 1995 Sites with Remedial Activities in Progress on September 30, 1995 Records of Decision Signed¹ Remedial Investigation/Feasibility Study Starts² Fund-Financed Potentially Responsible Party-Financed Remedial Investigation/Feasibility Studies in Progress on September 30, 1995 Remedial Design Starts² Fund-Financed Potentially Responsible Party-Financed Remedial Designs in Progress on September 30, 1995 Remedial Designs in Progress on September 30, 1995 Remedial Action Starts² Fund-Financed Potentially Responsible Party-Financed Remedial Actions in Progress on September 30, 1995 Removal Actions in Progress on September 30, 1995 Removal Action Starts² Fund-Financed Potentially Responsible Party-Financed Removal Action Completions² Fund-Financed Potentially-Responsible Party-Financed Site Assessment Activities CERCLIS Sites Added² Preliminary Assessments Conducted²		95% 346 854 187 30 33% 67% 836 84 29% 71% 413 110 16% 84% 516 311 81% 19% 298 76% 24%
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Records of Decision Signed¹ Remedial Investigation/Feasibility Study Starts² Fund-Financed Potentially Responsible Party-Financed Remedial Investigation/Feasibility Studies in Progress on September 30, 1995 Remedial Design Starts² Fund-Financed Potentially Responsible Party-Financed Remedial Designs in Progress on September 30, 1995 Remedial Action Starts² Fund-Financed Potentially Responsible Party-Financed Remedial Actions in Progress on September 30, 1995  Removal Activities  Removal Action Starts² Fund-Financed Potentially Responsible Party-Financed Removal Action Completions² Fund-Financed Potentially-Responsible Party-Financed  Site Assessment Activities		30 33% 67% 836 84 29% 71% 413 110 16% 84% 516 311 81% 19% 298 76%
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Fund-Financed Potentially Responsible Party-Financed Remedial Investigation/Feasibility Studies in Progress on September 30, 1995 Remedial Design Starts² Fund-Financed Potentially Responsible Party-Financed Remedial Designs in Progress on September 30, 1995 Remedial Action Starts² Fund-Financed Potentially Responsible Party-Financed Remedial Actions in Progress on September 30, 1995  Removal Activities  Removal Action Starts² Fund-Financed Potentially Responsible Party-Financed Removal Action Completions² Fund-Financed Potentially-Responsible Party-Financed Site Assessment Activities  CERCLIS Sites Added²		67% 836 84 29% 71% 413 110 16% 84% 516 311 81% 19% 298 76%
Remedial Investigation/Feasibility Studies in Progress on September 30, 1995 Remedial Design Starts² Fund-Financed Potentially Responsible Party-Financed Remedial Designs in Progress on September 30, 1995 Remedial Action Starts² Fund-Financed Potentially Responsible Party-Financed Remedial Actions in Progress on September 30, 1995  Removal Action Starts² Fund-Financed Potentially Responsible Party-Financed Removal Action Completions² Fund-Financed Potentially-Responsible Party-Financed  Site Assessment Activities  CERCLIS Sites Added²		836 84 29% 71% 413 110 16% 84% 516 311 81% 19% 298 76%
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Potentially Responsible Party-Financed  Remedial Designs in Progress on September 30, 1995  Remedial Action Starts <sup>2</sup> Fund-Financed Potentially Responsible Party-Financed  Remedial Actions in Progress on September 30, 1995  Removal Action Starts <sup>2</sup> Fund-Financed Potentially Responsible Party-Financed  Removal Action Completions <sup>2</sup> Fund-Financed Potentially-Responsible Party-Financed  Site Assessment Activities  CERCLIS Sites Added <sup>2</sup>		71% 413 110 16% 84% 516 311 81% 19% 298 76%
Remedial Designs in Progress on September 30, 1995 Remedial Action Starts <sup>2</sup> Fund-Financed Potentially Responsible Party-Financed Remedial Actions in Progress on September 30, 1995  Removal Action Starts <sup>2</sup> Fund-Financed Potentially Responsible Party-Financed Removal Action Completions <sup>2</sup> Fund-Financed Potentially-Responsible Party-Financed Site Assessment Activities  CERCLIS Sites Added <sup>2</sup>		413 110 16% 84% 516 311 81% 19% 298 76%
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Fund-Financed Potentially Responsible Party-Financed Remedial Actions in Progress on September 30, 1995  Removal Activities  Removal Action Starts <sup>2</sup> Fund-Financed Potentially Responsible Party-Financed Removal Action Completions <sup>2</sup> Fund-Financed Potentially-Responsible Party-Financed  Site Assessment Activities  CERCLIS Sites Added <sup>2</sup>		16% 84% 516 311 81% 19% 298 76%
Potentially Responsible Party-Financed Remedial Actions in Progress on September 30, 1995  Removal Activities  Removal Action Starts <sup>2</sup> Fund-Financed Potentially Responsible Party-Financed Removal Action Completions <sup>2</sup> Fund-Financed Potentially-Responsible Party-Financed  Site Assessment Activities  CERCLIS Sites Added <sup>2</sup>		84% 516 311 81% 19% 298 76%
Remodal Actions in Progress on September 30, 1995  Removal Activities  Removal Action Starts <sup>2</sup> Fund-Financed  Potentially Responsible Party-Financed  Removal Action Completions <sup>2</sup> Fund-Financed  Potentially-Responsible Party-Financed  Site Assessment Activities  CERCLIS Sites Added <sup>2</sup>		516 311 81% 19% 298 76%
Removal Activities  Removal Action Starts <sup>2</sup> Fund-Financed Potentially Responsible Party-Financed  Removal Action Completions <sup>2</sup> Fund-Financed Potentially-Responsible Party-Financed  Site Assessment Activities  CERCLIS Sites Added <sup>2</sup>		311 81% 19% 298
Removal Action Starts <sup>2</sup> Fund-Financed Potentially Responsible Party-Financed Removal Action Completions <sup>2</sup> Fund-Financed Potentially-Responsible Party-Financed Site Assessment Activities CERCLIS Sites Added <sup>2</sup>		81% 19% 298 · 76%
Fund-Financed Potentially Responsible Party-Financed  Removal Action Completions <sup>2</sup> Fund-Financed Potentially-Responsible Party-Financed  Site Assessment Activities  CERCLIS Sites Added <sup>2</sup>		81% 19% 298 · 76%
Fund-Financed Potentially Responsible Party-Financed  Removal Action Completions <sup>2</sup> Fund-Financed Potentially-Responsible Party-Financed  Site Assessment Activities  CERCLIS Sites Added <sup>2</sup>	:	19% 298 · 76%
Removal Action Completions <sup>2</sup> Fund-Financed Potentially-Responsible Party-Financed  Site Assessment Activities  CERCLIS Sites Added <sup>2</sup>		298 · 76%
Removal Action Completions <sup>2</sup> Fund-Financed Potentially-Responsible Party-Financed  Site Assessment Activities  CERCLIS Sites Added <sup>2</sup>	:	76%
Fund-Financed Potentially-Responsible Party-Financed  Site Assessment Activities  CERCLIS Sites Added <sup>2</sup>		
Site Assessment Activities CERCLIS Sites Added <sup>2</sup>		24%
CERCLIS Sites Added <sup>2</sup>		
	2	• •
		700
		813
Site Inspections Conducted <sup>2</sup>		584
National Priorities List Sites to Date		1,374
Sites Proposed for Listing During Fiscal Year 1995		9
Final Sites Listed During Fiscal Year 1995		30
Sites Deleted During Fiscal Year 1995		25
Enforcement Activities	•	
Settlements for All Potentially Responsible Party Response Activities	222	(\$851 million) <sup>3</sup>
Remedial Design/Remedial Action Settlements <sup>4</sup>	77	(\$671 million)
Unilateral Administrative Orders Issued (All Actions)	94	N/A
Cost Recovery Dollars Collected	N/A	(\$254 million)
Accomplishments at Federal Facility Sites		0.0
Records of Decision Signed	1	82
Remedial Investigation/Feasibility Study Starts <sup>2</sup>	:	45
Remedial Design Starts <sup>2</sup>		54
Remedial Action Starts <sup>2</sup>	<u> </u>	59

Remedial design/remedial action settlements include remedial design/remedial action consent decrees and unilateral administrative orders with potentially responsible parties have stated their intention to comply.

CERCLIS; Office of Waste Programs Enforcement; Office of Emergency and Remedial Response; Sources: Federal Register notices through September 30, 1995.

In other efforts, the Agency initiated work on the remaining five volumes of the Superfund Removal Procedures Manual.

#### **Remedial Progress**

Remedial progress during the fiscal year reflects the Agency's continuing efforts to accelerate the pace of cleanup activities and complete cleanups at Superfund sites. At the end of FY95, work had occurred at 95 percent of the 1,374 sites proposed to, listed on, or deleted from the NPL, and construction activities had been completed to place 346 NPL sites (25 percent) in the construction completion category. During the year, the Agency and PRPs started nearly 30 remedial investigation/feasibility studies (RI/FSs), 84 RDs, and 110 RAs. EPA also signed 187 records of decision (RODs) for Fund-financed and PRP-financed sites. The Agency also completed 37 five-year reviews as required under CERCLA Section 121(c) to ensure that remedies fully protect human health and the environment.

#### **Enforcement Progress**

Enforcement progress for FY95 reflects the Agency's continued commitment to maximize PRP involvement in financing and conducting cleanup, and to recover Superfund monies expended for response actions. During FY95, EPA reached agreements with PRPs worth more than \$851 million in PRP response work. Through its FY95 cost recovery efforts, EPA achieved \$160 million in settlements and collected more than \$254 million for reimbursement of Superfund expenditures. Examples of significant enforcement actions are provided in Chapter 4 of this Report.

While continuing to promote "enforcement first" to secure PRP involvement in financing and conducting cleanups, the Agency also worked to ensure equity in the enforcement process and to seek ways to reduce transaction costs. To support these goals during FY95, the Agency focused on increasing the use of allocation tools such as alternative dispute resolution, encouraging early settlements with *de minimis* and "de micromis" parties, fostering greater fairness for owners and prospective purchasers of Superfund sites, and evaluating the increased use of mixed funding. The

Agency also took steps to increase the effectiveness of compliance monitoring, improve cost recovery efforts, and expedite enforcement activities to support accelerated cleanups under SACM.

#### **Federal Facility Cleanups**

Federal departments and agencies are largely responsible for implementing CERCLA at federal facility sites. To ensure federal facility compliance with CERCLA requirements, EPA provides advice and assistance, oversees activities, and takes enforcement action where appropriate. At sites on the NPL, EPA must concur in remedy selection.

At the end of FY95, there were 2,070 federal facility sites identified on the Federal Agency Hazardous Waste Compliance Docket and there were 165 federal facility sites proposed to or listed on the NPL, including 160 final and five proposed sites.

Activities during the fiscal year at federal facility sites listed on the NPL, included starting approximately 45 RI/FSs, 54 RDs, and 59 RAs; signing 82 RODs; and achieving construction completion at seven sites.

During FY95, DoD, EPA and states continued to implement the Fast Track Cleanup Program for the Base Realignment And Closure (BRAC) Act. EPA's program activities were directed at working with the DoD and the states to achieve the goal of making property environmentally acceptable for transfer, while protecting human health and the environment at closing or realigning installations. Using resources provided under a Memorandum of Agreement with the DoD, EPA has participated on BRAC Cleanup Teams (BCTs) at 77 BRAC 1, 2, and 3 installations, 23 of which were NPL sites, and 54 were non-NPL. The BCT includes representatives from the military service, EPA, and the state regulatory agency.

CERCLA Section 120(e)(5) requires an annual report to Congress from each federal department or agency on its progress in implementing Superfund at its facilities. EPA's progress at its sites is provided in Section 5.4 of this Report. Of the sites on the Federal Agency Hazardous Waste Compliance Docket at the end of FY95, 25 were EPA-owned.

Exhibit ES-2
Summary of Program Activity by Fiscal Year

		- Cullin	idi y Oi	1109.4.		ity by i					
	FY80-86 Total	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	Total
Removal Completions <sup>1,2</sup>	810	230	320	260	290	270	340	290	240	298	3,348
CERCLIS Sites <sup>1</sup>	25,200	27,600	30,000	31,900	33,600	34,200	36,400	37,500	38,300	700	39,000
PA Completions <sup>1</sup>	20,200	4,000	2,900	2,200	1,600	1,300	1,900	1,100	900	813	36,913
SI Completions <sup>1</sup>	6,400	1,300	1,200	1,700	1,900	1,900	1,300	700	600	584	17,584
National Priorities List Sites <sup>3</sup>	901	964	1,194	1,254	1,236	1,245	1,275	1,320	1,355	1,374	1,374
Remedial Investigation/ Feasibility Study Starts <sup>1,2</sup>	660	210	170	170	170	70	90	60	<b>70</b>	30	1,700
Records of Decision Signed <sup>2</sup>	199	77	152	136	149	175	126	134	159	187	1,494
Remediai Design Starts <sup>1-2</sup>	120	110	120	180	130	160	170	130	.110	84	1,314
Remedial Action Starts <sup>1,2</sup>	70	70	70	110	80	100	110	. 120	120	110	960
Construction Completions <sup>4</sup>	_	<del>-</del>	-	_	-	61	88	68	61	68	346
National Priorities List Deletions	13	0	. 4	11	1	9	2	11	13	25	885

- 1 Numerical values for accomplishments based on information from CERCLIS have been rounded.
- Includes Fund-financed and potentially responsible party-financed activities; excludes federal facility activities and state-lead activities where no Fund monies were spent.
- The figures reported in this now represent the cumulative total of proposed, final, and deleted National Priorities List sites as of the end of each fiscal year.
- Adopted as measure of program progress by 1991 30-Day Study Task Force. FY91 value represents FY80 through FY91.
- 5 Total NPL deletions do not include sites that have since met CERCLA cleanup objectives or been deferred to other authorities.

Sources: CERCLIS; Office of Emergency and Remedial Response; Federal Register notices through September 30, 1995.

removal actions have been started and nearly 3,348 have been completed since the inception of the Superfund program.

The Environmental Response Team (ERT) continued to provide expert support for Superfund response actions. During the fiscal year, ERT conducted 157 Superfund responses, responded to 8 oil spills and 3 international incidents, and conducted

240 training courses nationwide. Response to international incidents are not paid for using Superfund dollars.

Under the reportable quantities (RQ) regulatory program EPA promulgated a final rule on June 12, 1995 (60 FR 30926) addressing the designation, RQs, and notification requirements for hazardous substances under CERCLA.

## Resource Estimate for Superfund Implementation

Under section 301(h)(1)(c) of CERCLA, EPA is required to estimate the resources needed to implement Superfund, and CERCLA requires that EPA provide the estimates in this Report. Since the enactment of CERCLA in 1980, Congress has provided Superfund with \$15.0 billion in budget authority (FY81 through FY95). This includes \$1.8 billion for the pre-SARA period (FY81 through FY86) and \$13.3 billion for the post-SARA period, FY87 through FY95.

Estimates of the long-term resources required to implement Superfund are based on the Outyear Liability Model (OLM). The OLM estimate of the cost of completing cleanup of current NPL sites is more than \$16.1 billion for FY96 and beyond, bringing the total estimated cost for the program to \$31.1 billion.

#### **Superfund Program Support Activities**

EPA took measures in FY95 to enhance community involvement, public access to Superfund information, and EPA's partnership with states and Indian tribes. As required by CERCLA Section 105(f), the Agency also engaged in efforts o encourage minority firm participation in Superfund contracting.

In its community involvement efforts, EPA continued measures to tailor activities to the specific needs of individual communities and to identify ways to enhance community involvement efforts. The Agency emphasized the importance of effective community involvement in its administrative improvements and reauthorization efforts. Agency also continued to provide technical outreach to communities, hold national conferences on community involvement, offer training workshops, and facilitate community access to technical assistance grants (TAGs). communities in obtaining technical assistance, EPA awarded 26 TAGs during the fiscal year, bringing the total number of TAGs awarded since FY88 to 177, for a total worth of more than \$9 million.

To enhance public access to Superfund information, the Agency continued its partnership with the National Technical Information Service (NTIS), which provides Superfund document distribution services. During FY95, the Agency expanded the Superfund document collection available through NTIS, continued outreach to inform the public of the services available, and began implementing a communications and outreach plan using NTIS services.

To support state and tribal involvement in the Superfund response activities, EPA has awarded nearly \$1.7 billion in cooperative agreements (CAs), including \$160 million awarded in FY95 through site-specific CAs. To further support state and tribal Superfund programs, EPA engaged in outreach activities, provided technical assistance, and began developing guidance for a state deferral program for NPL-caliber sites.

To promote small and disadvantaged business participation in Superfund contracting in FY95, EPA, through direct and indirect procurement, awarded contracts and subcontracts valued at more than \$147.4 million to minority contractors to perform Superfund work. Direct procurement involves any procurement activity in which EPA is a direct party to a contractual arrangement for supplies, services or construction. Under financial assistance programs (indirect procurement), EPA awards grants and/or cooperative agreements to states, local municipalities, universities, colleges, non-profit or profit-making institutions or firms, hospitals and individuals or otherwise known as recipients. This amount represents more than 10.1 percent of the total dollars obligated to finance Superfund work during the year. To help minority contractors become more successful in winning Superfund contracts and encourage them to participate in the Superfund program, EPA conducted training sessions. conferences, and seminars throughout the year.

#### Organization of this Report

Information prepared for this Report is assembled in response to Congressional requirements specified in CERCLA. Exhibit ES-3 is a guide to the information required under CERCLA and its location in the Report.

Exhibit ES-3
Statutory Requirements for the Report

	Statutory Require	ments for the	Report
CERCLA Section	CERCLA Requirement	Report Section	Report Content
301(h)(1)	Annual Report to Congress on the progress achieved in implementing	Executive Summary	Initiatives to improve the Superfund program
• *	Superfund during the preceding fiscal year	Chapter 1	Site evaluation progress
		Chapter 2	Emergency response progress
¢	,	Chapter 3	Remedial progress
•		Chapter 4	Enforcement progress
		Chapter 5	Federal facility cleanups
		Chapter 7	Community relations, state and Indian tribe, and public outreach activities
301(h)(1)(A)	Detailed description of each feasibility study (FS) at a facility	Section 3.2.4	Overview discussion of RODs signed during the fiscal year, including the number of treatment and containment remedies selected
•		Appendix C	List of RODs signed in the fiscal year
3Q1(h)(1)(B)	Status and estimated date of completion of each FS	Appendix A	Status and estimated completion date of each ongoing FS in progress at the end of the fiscal year
301(h)(1)(C)	Notice of each FS which will not meet a previously published schedule for completion and the new estimated date for completion	Appendix A	Scheduled completion date published for the last fiscal year, the scheduled completion date recorded in CERCLIS as of end of the current fiscal year, and identification of schedule changes
301(h)(1)(D)	An evaluation of newly developed feasible and achievable permanent treatment technologies	Section 3.3	Evaluation of newly developed technologies through the Superfund Innovative Treatment Evaluation Program
301(h)(1)(E) 121(c)	Progress made in reducing the number of facilities subject to review under CERCLA Section 121(c), which requires the report to Congress to contain a list of facilities for which a five-year review is required, the results of all such reviews, and any actions taken as a result of such reviews	Section 3.4	Annual update on progress being made on sites subject to review under CERCLA Section 121(c)

CERCLA Section	CERCLA Requirement	Report Section	Report Content
301(h)(1)(F)	Report on the status of all remedial and enforcement actions undertaken during the fiscal year, including a comparison to remedial and enforcement actions undertaken in prior fiscal years	Section 3.2.2	Information on fiscal year remedial activity starts (including PRP involvement) with a comparison of fiscal year activities to those of previous years
	undertaken in phor riscal years	Section 4.2	Information on fiscal year enforcement activities with a comparison of fiscal year activities to those of previous years
		Appendix A	Information on the status of each RI/FS and RA in progress at the end of the fiscal year
		Appendix B	Information on the status of RDs in progress at the end of the fiscal year
301(h)(1)(G)	Estimates of the amount of resources, including the number of work years or personnel, which would be necessary for each department, agency, or	Sections 6.1 and 6.3	EPA resource estimates for completion of CERCLA implementation
	instrumentality which is carrying out any activities to complete the implementation of all duties vested in the department, agency, or instrumentality	Section 6.4	Other federal agency's and department's estimates for completion of CERCLA implementation
301(h)(2)	Review by the Inspector General and submission of any report related to EPA's activities for reasonableness and accuracy	Appendix D	Review of the Inspector General on this Report
105(f)	Brief description of the contracts which have been awarded to minority firms under Superfund and the efforts made to encourage the participation of such firms in the Superfund program	Section 7.2	Information on minority contracting awards by EPA, states, Indian tribes, and other federal agencies using Superfund monies. EPA efforts to encourage increased minority contractor participation in the Superfund program
120(e)(5)	Annual report to the Congress concerning EPA progress in implementing remedial activities at its facilities	Section 5.4	Report on EPA progress in CERCLA implementation at EPA-owned facilities, including a state-by-state report

#### Fiscal Year 1995 Initiatives

In FY95, the Agency focused efforts on identifying possible legislative amendments that would improve the efficiency and equity of the program. Working within the existing statutory and regulatory framework, the Agency also continued to

implement the recommendations of the 1993 Superfund Administrative Improvements Task Force. The task force recommendations included implementation of nine new or enhanced initiatives in FY95 and the continuation of eight ongoing initiatives. Exhibit ES-4 provides a summary of major initiatives undertaken by the Agency in FY95.

Exhibit ES-4
Fiscal Year 1995 Superfund Program Initiatives

Fiscal Year 1995 Superfund Program Initiatives			
Promoting Economic Redevelopment			
Brownfields . Initiative:	<ul> <li>EPA appointed a Brownfield coordinator to each Region to serve as a point-person for local industrial property revitalization and awarded 29 Brownfield pilots in 1995.</li> <li>EPA is also fostering job-development and training through partnership with Brownfield pilot communities and community colleges.</li> </ul>		
Removing Sites from CERCLIS:	<ul> <li>In February 1995, EPA archived 24,000 sites from the CERCLIS inventory that were determined to be of no further federal Superfund interest. (Over 39,000 sites have been listed in CERCLIS, but less than 5% actually become NPL sites.)</li> </ul>		
Partial NPL Deletions:	<ul> <li>In May 1995, a workshop was convened to evaluate several alternatives for deleting portions of sites from the NPL. A policy change was recommended that would allow Regions to delete portions of sites based on site geography or medium, in an effort to promote the return of uncontaminated parcels of sites to productive use.</li> </ul>		
Enforcement Reform			
Initiating the Use of Allocation Pilots:	<ul> <li>EPA initiated a new approach to allocation of Superfund costs to PRP's, whereby a neutral allocator selected by the PRP's and EPA conducts a non-binding, out-of-court allocation procedure, and assigns shares of responsibility to the PRP's based on a number of equitable factors. The PRP's can then settle their liability based on their "share" of the cleanup costs assigned by the neutral party.</li> <li>Eight pilot sites were selected, and were guided by several new documents: U.S. Statement of Intent, Overview of the Pilot Allocation, Confidentiality Agreement, and Litigation Standstill and Tolling Agreement.</li> </ul>		
Improving the PRP Search Process (initiated May 1995):	<ul> <li>EPA convened a national Conference in March 1995 to prepare for piloting efforts that would determine whether the time line proposed in the Superfund Reauthorization Act of 1994 is achievable.</li> <li>14 pilot sites were identified and used to test methods of streamlining the PRP search process including, using newspaper advertisements to solicit information about PRP's from the public, conducting early interviews of parties to obtain information and minimize the need for multiple rounds of requests, and gathering information about PRP's regarding the actions of other parties.</li> <li>Based on the findings of the pilot efforts and the Conference, EPA began to expand and update existing PRP search guidance and reorient the PRP search process to facilitate expedited settlements and allocation of responsibility.</li> </ul>		
Expedited Settlements:	<ul> <li>EPA began piloting expedited settlement efforts in FY95. At sites where the PRP search process is substantially complete, EPA is settling early with de minimis contributors and with certain PRP's who have a demonstrated limited ability to pay.</li> </ul>		

Executive Order 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Environmental Justice Strategy":  Issued in May 1995 to specifically address EPA's environmental justice en 12898, "Issued in Asserted Strategy in the population of the pop	ation, EPA's verse v, and nental nents, public olved t the d the ery of rdous rough
<ul> <li>*Environmental Justice Strategy":</li> <li>Focuses on two main goals: 1)To ensure "No segment of the popul regardless of race, color, national origin, or income, as a result of policies, programs, and activities, suffers disproportionately from the activities, programs, and activities and all people live in clean, healthy sustainable communities", and 2) "Those who must live with environmental groups, businessesmust have every opportunity for participation in the making of those decisions. An informed and invocommunity is a necessary and integral part of the process to protect environment."</li> <li>Medical Assistance Plan (MAP) which is designed to improve the delive existing medical services to communities with potential exposures to haza</li> </ul>	ation, EPA's verse v, and nental nents, public olved t the d the ery of rdous rough
Plan:  Medical Assistance Plan (MAP) which is designed to improve the delive existing medical services to communities with potential exposures to haza	ery of rdous rough
substances, and to build environmental health expertise in communities the physicians training and placement.	aalth
Minority Worker Training:  The Agency, in cooperation with the National Institute of Environmental H Services, began testing a range of strategies for recruiting and training cit of low-income and minority communities located near Superfund sites, a FY95 EPA piloted seven training programs prescribing pre-employment training and life-skills), as well as environmental health and safety training cit of low-income and minority communities located near Superfund sites, a FY95 EPA piloted seven training programs prescribing pre-employment training and life-skills), as well as environmental health and safety training and training cit of low-income and minority communities located near Superfund sites, a FY95 EPA piloted seven training programs prescribing pre-employment training cit of low-income and minority communities located near Superfund sites, a FY95 EPA piloted seven training programs prescribing pre-employment training cit of low-income and minority communities located near Superfund sites, a FY95 EPA piloted seven training programs prescribing pre-employment pre-emp	izens nd in ining inina
Enhancing Community Involvement	
<ul> <li>Cad's, which are designed to fit the needs of the particular community, a effective tool in making information more accessible to the public, are facilitating public participation in cleanup efforts.</li> <li>By the end of FY95, the Agency had piloted 26 CAG sites within 9 Reg offices.</li> </ul>	nd in
Technical Assistance Grants (TAG's):  EPA revised TAG regulation to simplify the TAG application and administrative cap.  EPA revised TAG regulation to simplify the TAG application and administrative to simplify the TAG application and administrative cap.	ating own
Community Involvement and Enforcement:  EPA initiated 13 pilots to observe what impact community review and commun	nent ould
Improving Clean-up Effectiveness and Consistency	
<ul> <li>Soil Screening         Guidance (released for public comment FY95):</li> <li>Provides soil screening levels (SSL's) for 100 contaminants in soil, contaminant levels below which there is no concern, and contaminant levels above we further site-specific evaluation is warranted.</li> <li>SSL's can be used to streamline investigations, thereby saving time and mo and to enhance consistency across soil cleanups.</li> </ul>	hich

Land-Use Directive:	<ul> <li>Issued in May 1995 to clarify how land-use should be considered in risk assessment, and to describe how the assumptions about land-use should be made by involving the community, considering the context of the site, and recognizing the site's potential for reuse.</li> </ul>
Presumptive Remedies:	<ul> <li>EPA examined presumptive remedies for sites with contaminated groundwater, wood-treater facilities, sites with polychlorinated biphenyl (PCB) contamination, manufactured gas plants, and grain storage sites.</li> </ul>
Expanding the Role o	f States and Indian Tribes
Voluntary Cleanup Program:	<ul> <li>EPA initiated a joint EPA, state, and tribal effort to define roles in promoting the development and operation of State and Tribal voluntary cleanup programs, which are designed to speed the cleanup of non-NPL sites.</li> <li>A workgroup consisting of EPA, DOJ, and State representatives was formed to draft EPA guidance that would assist in developing MOA language that addresses state voluntary cleanup programs, and that would assist in examining vehicles for the distribution of any financial support EPA may offer such programs.</li> </ul>
Federal, State, and Tribal Site Management Program:	<ul> <li>In May 1995, EPA issued final guidance on the deferral program, that is meant to defer the responsibility for overseeing and compelling PRP actions at selected NPL-caliber sites to the states.</li> </ul>
State and Tribal Block Funding:	<ul> <li>The Agency is working with states and tribes to identify options to consolidate the Superfund process through block funding. Ten states and one tribe are currently participating in efforts to pilot the block funding concept.</li> </ul>

# Chapter 1 Site Evaluation Progress

By the end of FY95, nearly 40,000 potential hazardous waste sites had been identified and added to the Superfund inventory. EPA and states continued to evaluate these sites and had begun evaluation of more than 95 percent of these sites for potential threats to human health and the environment by the end of the year. To streamline the site evaluation process and decrease the amount of time required for site evaluations on specific candidate sites, EPA continued to use an integrated, single-assessment investigation process initiated by the Superfund Accelerated Cleanup Model (SACM). Integrated assessments involve consolidating some or all of the assessment steps, as well as other site studies, into a single, integrated site evaluation.

EPA announced the Brownfields Economic Redevelopment Initiative in January 1995. This initiative places a new focus on brownfields and is directed toward empowering states, governments, communities and others to work together to assess, safely cleanup and sustainably brownfields. To further assist in the economic redevelopment, EPA amended the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) in such a way that sites identified in the CERCLA Information System (CERCLIS) as needing no further EPA financed response actions could be placed in a separate "archived" database. EPA also continued to address technical complexities associated with lead and radionuclide contamination. and improved site evaluation guidance.

#### 1.1 Site Evaluation Process

The Superfund site evaluation process begins when EPA is notified of a potentially threatening hazardous waste site or incident. The Agency

records basic information about the site in the inventory of potential hazardous waste sites maintained in CERCLIS, which also tracks subsequent site specific actions and decisions. At sites that pose an immediate threat to human health, welfare, or the environment, EPA uses its removal authority under Comprehensive Environmental Response Cleanup and Liability Act (CERCLA) to address the threat. A Superfund removal action may be taken at any time during the evaluation process or after EPA has determined that no federal involvement is warranted under CERCLA if an immediate threat to human health or the environment is identified.

At other sites, a two-stage assessment is conducted consisting of: (1) a preliminary assessment (PA) to determine whether a potential threat exists; and, (2) a site inspection (SI) to determine the relative threat posed and to evaluate the site for possible listing on the National Priorities List (NPL). The NPL is the list of sites designated for long-term remedial evaluation and response.

At any point in the evaluation process, EPA may determine that the Superfund evaluation of the site is complete and no further steps to list the site on the NPL are needed. This decision does not necessarily mean that there is no hazard associated with the site. Rather, based on available information, the site does not meet the criteria for placement on the NPL. Sites not considered appropriate for the NPL might be addressed under the Resource Conservation and Recovery Act (RCRA), state laws, or other authorities.

EPA's Brownfields Initiative announced by Administrator Carol Browner on January 25, 1995,

outlined EPA's activities and future plans to help states and localities implement and realize the benefits of the Brownfields Initiative. Four key areas of action include awarding pilots, building partnerships with brownfields stakeholders; clarifying liability and cleanup issues; and fostering workforce development and job training. The brownfields effort will help reverse the downward spiral of unaddressed contamination, declining property values, and increased unemployment often found in inner city industrial areas and will continue to evolve as EPA seeks advice and input from a broad range of stakeholders.

As part of its effort to eliminate obstructions to the cleanup and redevelopment of previously used property, EPA removed and archived approximately 24,000 sites from CERCLIS in 1995. Historically, EPA has kept all sites in the CERCLIS inventory regardless of status. Even sites where no action was needed or taken remained on the list as part of EPA's tracking mechanism. Sites are archived, after investigation(s) have determined no further federal involvement is necessary. EPA initiatied the archive process to eliminate any possible disincentive to purchase, improve, redevelop, and revitalize sites as a result of a mere inclusion of a site in CERCLIS. Sites are archived if EPA determines that:

- no contamination was found at the site;
- contamination was quickly removed without the need for the site to be placed on the NPL and associated enforcement actions are complete;
- the site, while contaminated, did not meet the criteria for inclusion on the NPL; or
- the contamination does not currently require any Superfund response actions.

Based on the FY93 Superfund Administrative Improvements Final Report, EPA established an initiative to enhance the state role in the NPL listing process. This initiative resulted in the development of the OSWER Directive (9375.6-11) "Guidance on Deferral of NPL Listing Determinations While States Oversee Response Actions." This directive allows EPA to consider the deferral of an NPL site to the state or federally-recognized tribal government if

certain conditions are met and agreed upon by all parties involved. The guidance provides a framework for states, and federally-recognized tribes to determine the most appropriate, effective, and efficient means to cleanup sites. The guidance also accounts for differing capabilities of participating states and tribes.

## 1.2 Fiscal Year 1995 Progress

During FY95, EPA continued its progress in identifying and assessing potential hazardous waste sites.

## 1.2.1 CERCLIS Site Additions: Discoveries and Removals

EPA is notified of potential hazardous waste sites in a variety of ways. Information may be provided by states, handlers of hazardous materials, or concerned citizens. Local law enforcement officials may submit a formal report to EPA or facility managers may notify EPA of a release as required by CERCLA Section 103. Section 103 specifies that a person, such as a manager in charge of a vessel or facility, immediately report to the National Response Center any release of a hazardous substance of an amount that is equal to or greater than the reportable quantity for that substance. The National Response Center operates a 24-hour hotline for immediate notification. Penalties are imposed for failure to comply with this reporting requirement.

When the Agency is notified of a site that may pose a threat to human health or the environment, EPA records basic information about the site in CERCLIS. EPA added more than 700 sites to CERCLIS during FY95, bringing the total number of sites under Superfund to 39,000. Preliminary assessments have been or will be conducted to initially assess threats posed by these sites.

## 1.2.2 Preliminary Assessments Completed

When notified of a potential hazardous waste site, EPA or the state will conduct a PA to assess the threat posed by the site. The PA can include either on-site or off-site reconnaissance activities, such as an on-site visit or survey, an off-site perimeter

survey, or collection of data from local authorities. EPA or the state will also review other existing site-specific information for such items as past state permitting activities, local population statistics, and any other information concerning the site's potential effect upon the environment. PA activities enable the Agency or state to determine whether further study of the site or a removal assessment/action is necessary.

EPA and states conducted more than 813 PAs in FY95. Since the inception of Superfund, PAs have been completed at approximately 36,913 sites. About 70 percent of these PAs resulted in no further action decisions under Superfund; the remainder have proceeded to the SI stage for more extensive evaluation.

#### 1.2.3 Site Inspections Completed

If the PA indicates that a potential threat to human health or the environment is posed by the site, EPA will perform an SI to determine whether the site should be proposed for listing on the NPL. The SI usually includes collecting and analyzing environmental and waste samples to identify:

- the hazardous substances present at the site;
- the concentrations of these substances:
- whether the substances are being released or there is potential for their release; and
- whether the identified hazardous substances are attributable to the site.

During the SI, data are gathered through increasingly focused collection efforts. For sites judged to be prospective candidates for the NPL, the data will be used to calculate a score using the Hazard Ranking System (HRS). The HRS serves as a screening device to evaluate and measure the relative threat a site poses to human health, welfare, or the environment and to determine whether the site is eligible for placement on the NPL. The HRS evaluates four pathways through which contaminants from a site may threaten human health or the environment: ground water, surface water, soil, and air.

The Agency and states completed 584 SIs during FY95 for a total of more than 17,584 SIs conducted since the inception of the Superfund program. About 50 percent of these SIs resulted in no further action decisions under Superfund. The remainder have undergone additional assessment, or are awaiting further EPA action such as proposal to the NPL.

#### 1.2.4 Site Inspection Prioritization

When the revised HRS was promulgated in response to a mandate in SARA, EPA could no longer use the original HRS for making NPL determinations. At that time, several thousand sites were eligible for NPL listing based on SIs conducted under the original HRS. EPA developed the site inspection prioritization (SIP) process to update preliminary HRS scores at those sites based on the revised HRS model.

SIPs were limited to 6,600 sites where an SI was conducted prior to August 1, 1992; but is also used to assist in identifying candidates for early actions under SACM. EPA completed approximately 1,800 SIPs in FY95. Most SIPs completed have resulted in no further action decisions.

## 1.3 National Priorities List

The NPL is the list of sites for long-term remedial evaluation and response. EPA evaluates the potential hazard of sites using the HRS. If a site scores 28.50 or higher, the site is eligible for listing on the NPL. For those sites proposed to the NPL, the Agency solicits public comments for consideration, and then either announces the final site listing on the NPL or removes the site from consideration for listing. A site remains on the NPL until no further CERCLA response action is appropriate. When this condition is met, EPA deletes the site from the NPL.

## 1.3.1 National Priorities List Update

At the end of FY95, 1,374 sites were proposed to, listed on, or deleted from the NPL: 1,236 currently listed sites, 58 proposed sites, and 81 deleted sites where all CERCLA cleanup goals have been achieved. Exhibit 1.3-1 illustrates the historical cumulative number of sites on the NPL for each

fiscal year since SARA was enacted in 1986. Sites deleted from the NPL reflect an activity required to be reported. At the end of FY95, the 1,374 sites proposed to, listed on, or deleted consisted of the following:

- 1,212 non-federal sites (1,083 currently listed sites, 52 proposed sites, 78 deleted sites); and
- 162 federal sites (153 currently listed sites, 6 proposed sites and 3 deleted sites).

Updates to the NPL during FY95 included proposal of nine sites (7 non-federal and 2 federal facility sites), final listing of 30 sites (23 non-federal and 7 federal facility sites), and deletion of 25 sites (22 non-federal sites and 3 federal facility sites). Twenty-eight sites were proposed for deletion during the fiscal year, including 23 of the 25 sites that were deleted. These proposals to and listings on the NPL were included in one proposed rule (NPL Proposal 18) and four final rules. The proposed rules was published in the *Federal Register* on February 13,

1995 (7 non-federal sites and 2 federal sites). The final rules were published in the *Federal Register* on December 16, 1994 (14 non-federal sites and 4 federal sites), April 25, 1995 (3 non-federal sites and 1 federal site), May 26, 1995 (1 non-federal site), and September 29, 1995 (5 non-federal sites and 2 federal sites).

## 1.3.2 Relationship Between CERCLIS and NPL Update

CERCLIS is used to track the discovery of potential hazardous waste sites, including those that are subsequently listed on the NPL, and to track actions at these sites. Of the 39,000 sites in CERCLIS at the end of FY95, 1,374 were either proposed to, listed on, or deleted from the NPL. Although the sites on the NPL are a relatively small subset of the inventory in CERCLIS (approximately 3.4 percent), they generally are the most complex and environmentally significant sites. Under CERCLA, EPA can only use the Trust Fund for long-term remedial actions at NPL sites. Fund money,

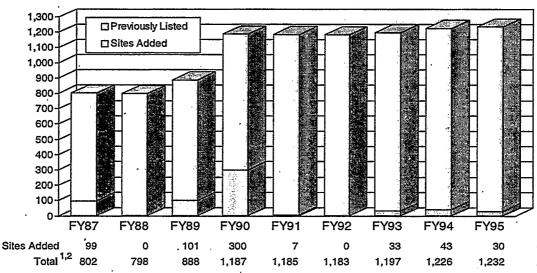


Exhibit 1.3-1
Final NPL Sites for Fiscal Year 1987 Through Fiscal Year 1995

The total number of sites listed final on the NPL from 1983 to 1986 was 703.

Source: Federal Register notices through September 30, 1995.

This graph illustrates *final* NPL sites only and reflects the fact that EPA deleted 13 sites from FY80 to FY86, 4 sites in FY88, 11 sites in FY89, 1 site in FY90, 9 sites in FY91, 2 sites in FY92, 11 sites in FY93, 13 sites in FY94, and 25 sites in FY95. At these deleted sites, all CERCLA cleanup objectives were achieved. In FY93, one additional site was deleted because it was deferred to another authority for cleanup. Also, eight sites were either voluntarily removed from the NPL or removed from the NPL by court order (seven sites in FY93 and one in FY94). The total of *final*, proposed, and deleted NPL sites as of September 30, 1995 was 1,232.

however, can be used to conduct a removal action at a site, whether or not it is on the NPL. Chapter 3 of this report discusses removal actions at NPL and non-NPL sites and Chapter 4 of this report highlights progress in remediating NPL sites.

## 1.4 Site Evaluation Support Activities

EPA manages two support programs dedicated to addressing lead and radionuclide contamination because these contaminants present special hazards and problems. During FY95, EPA continued its progress under these programs. Under the lead program, EPA continued to work on risk assessment procedures and tools as well as provide advice on national lead issues. Under the radiation program, EPA continued to develop Superfund guidance and examined environmental fate and transport modeling for radionuclides.

## 1.4.1 Lead Program Progress

Lead is one of the most frequently found toxic substances at Superfund sites. Exposure to lead at Superfund sites occurs by multiple media and EPA risk assessments consider all sources of exposure to more fully assess lead risks. In order to promote more consistent evaluations and continually improve upon our assessment and management practices, the use of Agency experts to provided advice on national lead issues has been part of the Agency's Administrative Reforms. During 1995, efforts were initiated to increase the involvement of site managers and senior managers in their interactions with the Lead Technical Review Workgroup.

## Lead Technical Review Workgroup

The Lead Technical Review Workgroup provides advice and recommendations on lead risk assessment issues. This advice has included the development of guidance documents and review of individual risk assessments. While discussions with individual site managers have taken place on a regular basis, interactions with multiple site managers to identify information needs and prioritize activities was facilitated as a result of the formation of the Lead Sites Workgroup (LSW), a group of site managers that address lead issues from across different EPA regions and Headquarters.

Coordination and information sharing were also improved in FY95 through the exchange of information with senior regional and headquarters managers.

## 1.4.2 Radiation Program Progress

During the fiscal year, EPA made progress in addressing technical complexities associated with site assessment, risk assessment, and cleanup technology evaluation for sites contaminated with radionuclides. Specific activities included developing Superfund guidance. examining environmental fate and transport modeling, conducting technology demonstrations evaluations, and providing technical support to the Regions.

#### Site Assessment

Through an interagency agreement with the Agency for Toxic Substances and Disease Registry, the Office of Radiation and Indoor Air (ORIA) provided assistance in conducting site evaluations and health assessment in areas near DOE nuclear weapons productions facilities, including the San Ildefonso Indian Pueblo near the Los Alamos National Laboratory, the environs surrounding the Fernald Environmental Management Project, and the areas surrounding the Mound Laboratory site.

## **Environmental Fate and Transport Modeling**

EPA continued to work with representatives from the Department of Energy (DOE) and the Nuclear Regulatory Commission (NRC) as part of an interagency workgroup evaluating environmental fate and transport modeling for radionuclides. The interagency workgroup completed two guidance documents in FY95. The workgroup continued to prepare additional technical documents:

 Draft Report: Three Multimedia Models Used in Support of Cleanup Decision making at Hazardous, Mixed, and Radioactive Waste Sites: A Technical Evaluation of MEAS, MMSOILS, and PRESTO-EPA-CPG. Reviews three multimedia models of interest to the participants based on documentation published reviews, personal interviews with the model developers, and on model summaries extracted from computer databases and expert systems.

 Draft Report: A Review Guide for Model Applications at Sites Contaminated with Radioactive, Hazardous, and Mixed Waste Substances. Documents a process by which ground-water flow and transport models may be applied, and how applications by others may be systematically reviewed during each phase of the remedial process.

#### **Support and Liaison Activities**

EPA continued participation in an Interagency Steering Committee on Radiation Standards. Efforts focused on harmonizing the approaches taken by EPA and NRC to risk assessment and risk management involving radiation hazards. Other issues being studied include radiation cleanup standards, recycling, mixed waste and interagency cooperation.

EPA continued to provide technical assistance in the evaluation of proposals to exclude naturally occurring radioactive materials (NORM) from CERCLA as part of the reauthorization process. These efforts have included generation specific questions and answers, analyzing draft language, defining establishing criteria terms, differentiating between NORM near background radiation levels and NORM where anthropogenic activity has concentrated these materials creating increased levels of risk. In addition, OERR has continued survey and tracking activities at sites with radionuclide or mixed waste contamination. This is accomplished in the Superfund NPL Assessment Program (SNAP).

## 1.4.3 Site Evaluation Regulations and Guidance

EPA published the following site evaluation regulations and guidance during FY95:

EPA issued a notice of proposed rulemaking for "Administrative Reporting Exemptions for Certain Radionuclide Releases" under CERCLA and EPCRA (40 CFR 302 and 40 CFR 355). These exemptions are for releases of naturally occurring

radionuclides associated with land disturbances incidental to extraction activities at certain kinds of mines, and for coal and coal ash piles at all sites. Future activities will involve responding to public comment and issuing a final rule.

During FY95, EPA issued final guidance on OSWER Directive (9375.6-11) "Guidance on Deferral of NPL Listing Determinations While States Oversee Response Actions." This directive allows EPA to consider the deferral of an NPL site to the state or tribal organization if certain conditions are met and agreed upon by all parties involved. Since 1994, a total of eight sites have been formally deferred, while several sites have been informally deferred or are under consideration for deferral.

An interagency workgroup completed two guidance documents entitled "A Technical Guide to Ground-Water Model Selection Contaminated with Radioactive Substances" and "Evaluating Technical Capabilities of Ground-Water Models Used to Support the Cleanup of Low-Level Radioactive Waste Sites: An Illustrative Critique of Three Representative Models." The first document addresses the selection of ground-water flow and contaminant transport models and the second study describes a process for critically evaluating the technical capabilities of ground-water models, using three models that have been used in remedial investigation/feasibility studies.

EPA continued to update toxicity information on radionuclides for the *Health Effects Assessment Summary Tables (HEAST)*:

EPA developed guidance for radionuclide toxicity assessment. At the end of FY95, the Radiation Exposure and Risk Assessment Manual was undergoing peer review;

EPA continued work on a toxicity manual for addressing risk assessment radiation issues. A draft document was produced and will be reviewed by other agencies and the Regions. This document, together with an exposure manual, will replace Chapter 10 of the Risk Assessment Guide for Superfund (RAGS).

EPA continued guidance development for determining the appropriate treatment options for soil contaminated with radionuclides.

EPA continued to develop standard cleanup levels for radioactive materials in soil and ground water at federal facility sites. The draft technical support document for the proposed *Radiation Site Cleanup Regulation* was submitted to the Science Advisory Board's Radiation Advisory Committee for review.

EPA continued development of a proposed Federal Register rule, "EPA Radiation Site Cleanup Regulation." This rule would establish cleanup levels for sites with radioactive contamination prior to the sale or public use of the site. It also specifies levels of cleanup necessary to protect human health and the environment.

EPA continued development of a fact sheet explaining how the rulemaking described above will become an Applicable or Relevant and Appropriate Requirement (ARAR) under CERCLA. Supplementing this fact sheet will be two supplementary guidance documents: (1) a 750-page document explaining how to set background radiation levels and apply relevant confidence levels for risk-based decision making; and, (2) a document which describes analytical methods for conducting measurements under the rule.

EPA sponsored an effort to develop a probablistic decision support tool for evaluating wastes sites, including mixed waste sites.

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## Chapter 2

## **Emergency Response Progress**

Throughout the 15-year history of Superfund, removal actions have successfully prevented, minimized, or mitigated threats to human health, welfare, or the environment. EPA and potentially responsible parties (PRPs) have initiated 3,971 removal actions to address threats posed by the release or threatened release of hazardous substances, including 311 undertaken in FY95. The expanded use of removal authority to more rapidly reduce risks posed by Superfund sites is a key element of the Superfund Accelerated Cleanup Model (SACM).

This chapter discusses the removal action process, the progress achieved through Superfund removals in addressing threats to human health and the environment, the contributions of the Environmental Response Team (ERT), and emergency response rulemaking and guidance development.

#### 2.1 Removal Action Process

Removal actions are taken in response to a release or threat of release of a hazardous substance or of a pollutant or contaminant that may present an imminent and substantial danger to the public health or welfare. Examples of situations that may warrant removal actions include chemical spills or fires at production or waste storage facilities, transportation accidents involving hazardous substances, and illegal disposal of hazardous waste (midnight dumping). A removal action can occur at any point in the Superfund process. Managed by a federal On-Scene Coordinator (OSC), a removal action is often short-term, and addresses the most immediate threats. Removals comply with substantive applicable or relevant and appropriate requirements (ARARs) to the extent practicable, given the exigencies of the

situation. ARARs are substantive requirements of federal and more stringent state environmental laws.

When notified of a release or threat of release that may require a removal action, the Agency (or lead-Agency) conducts a removal site evaluation to determine the source and nature of the release, the threat to public health and the environment, and whether an appropriate response has been initiated. A removal site evaluation could be completed in minutes or months, depending on the specific incident and the information available to determine the need for a removal action. When the removal site evaluation is completed, the Agency reviews the results and other factors to determine the appropriate extent of a removal action. At any point in this process, EPA may refer the site for further evaluation or determine that no further action is necessary. When it concludes that a removal action is required, the Agency undertakes an appropriate response to minimize or eliminate the threat.

The Agency defines three kinds of removal actions based on the time available before a response action must be initiated. "Emergency" removal actions require a prompt response at the site. "Time-critical" removal actions are conducted when the Agency (or lead Agency) concludes that the action must begin within six months. For "non-time-critical" removal actions, the planning period may extend for more than six months; during this planning period, the lead agency conducts an engineering evaluation/cost analysis for the response actions and seeks public comment on the response options.

To document the selection of a response action, the Agency prepares an action memorandum that states the authority for initiating the action, the action to be taken, and the basis for selecting the response. EPA also establishes an administrative record, compiling the documents that form the basis for the selection of the response action. The following sections discuss additional aspects of the removal action process, including community involvement, the role of the OSC, and CERCLA limitations on the scope of removal actions.

#### **Community Involvement in Removal Actions**

EPA provides many opportunities for community involvement during the removal process. The Agency appoints an official spokesperson to keep the public informed of the progress of a given removal action. The administrative record file and index of documents maintained at the central location is made available to the public (except confidential portions) at a repository at or near the site and at EPA offices. If the removal action is expected to continue beyond 120 days, the lead agency must involve local officials and other parties in the process through such activities as community interviews and development of a community relations plan.

#### The On-Scene Coordinator

The OSC organizes, directs, and documents the removal action. The specific responsibilities of the OSC include conducting field investigations, monitoring on-scene activities, and overseeing the removal action. The OSC is required to prepare the action memoranda including description of the need for a removal response, the proposed action, and the rationale for the removal for all fund-financed actions conducted under removal authority. In addition, if requested by the National Response Team, the OSC will prepare a final report that describes the site conditions prior to the removal action, the removal action performed at the site, and any problems that occurred during the removal action.

## Fund-Financed Removal Action Statutory Limits

Removal actions are generally short-term, relatively inexpensive responses to releases or threats of releases that pose a danger to human health,

welfare, or the environment. Accordingly, Congress included limitations on removal actions in CERCLA. The cost of a fund-financed removal action is limited to \$2 million, and the duration is limited to one year. Congress established exemptions from these limitations for specific circumstances. A removal action may exceed the monetary and time limits if:

- Continued response is required immediately to prevent, limit, or mitigate an emergency; there is an immediate threat to public health, welfare, or the environment; and such action cannot otherwise be provided on a timely basis; or
- Continued response action is otherwise appropriate and consistent with the remedial action (RA) to be taken.

During FY95, EPA granted 18 exemptions for removal actions to exceed the \$2 million limitation. In addition, EPA granted 25 exemptions allowing removal actions to continue for more than one year.

#### 2.2 Fiscal Year 1995 Progress

Since the inception of Superfund, the Agency and PRPs have begun 3,971 removal actions at National Priorities List (NPL) and non-NPL sites to address threats to human health, welfare, or the environment posed by releases or potential releases of hazardous substances. Under SACM, the Agency is expanding its use of removal authority to further expedite response, especially at NPL sites.

#### 2.2.1 Status Report on Removal Progress

Of the 3,971 removal actions undertaken by EPA and PRPs under the Superfund program, 311 were started in FY95 (see Exhibit 2.2-1). Of these 311 removal actions, PRPs financed 59 and EPA financed 252. The removal actions started by PRPs included 20 removal actions at NPL sites and 39 removal actions at non-NPL sites. EPA started 33 removal actions at NPL sites and 219 removal actions at non-NPL sites. The 311 removal actions begun by EPA and PRPs in FY95 compared to 310 started in FY94.

As shown in Exhibit 2.2-2, EPA and PRPs have completed 3,348 removal actions under the

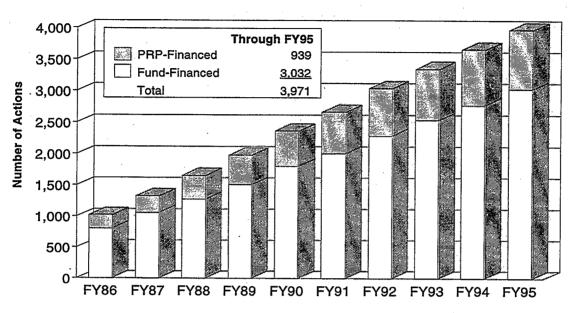


Exhibit 2.2-1
Cumulative Removal Action Starts

Source: CERCLIS. October 10, 1995.

Superfund program, including 298 in FY95. Of the 298 removal actions completed during the fiscal year, PRPs financed 73, including 27 at NPL sites and 46 at non-NPL sites. EPA financed 225 of the completed removal actions, including 29 at NPL sites and 196 at non-NPL sites. The 298 actions completed by EPA and PRPs in FY95 compared with 240 completed by EPA and PRPs in FY94.

Removal actions that were begun but are not yet complete are considered "ongoing." Ongoing removals include actions that have been in progress less than 12 months at the end of a fiscal year and removal actions that have been granted exemptions from the statutory one-year duration limit. Sites where a removal action has taken place, including thermal treatment, but the contaminants have not yet been transported to a disposal facility are also defined as having ongoing removals.

## 2.3 Environmental Response Team Activities

Under the National Oil and Hazardous Substances Pollution Contingency Plan, EPA manages the ERT. Over its 15 years of service, this team of EPA experts has been available to OSCs and Remedial Project Managers to support removal and remedial actions 24 hours a day, 365 days a year. In addition to its response support, ERT conducts introductory and intermediate-level training courses in health and safety and other technical aspects of response. ERT provides expertise in emergency response, hazard assessment, health and safety, air monitoring, alternative and innovative technology, site investigation, ecological damage assessment, cleanup contractor management, and oil and chemical spill control.

During FY95, ERT conducted approximately 157 Superfund responses and responded to 8 oil spills and 3 international incidents. ERT also offered 240 training courses nationwide.

3,500 **Through FY95** PRP-Financed 743 3,000 **Fund-Financed** 2.605 Total 3,348 2,500 **Number of Actions** 2,000 1,500 1,000 500 FY88 FY89 FY90 FY91 FY92 FY93 FY94

Exhibit 2.2-2
Cumulative Removal Action Completions

Source: CERCLIS. October 20, 1995.

## 2.4 Emergency Response Regulations and Guidance

Under the reportable quantity (RQ) regulatory program; the Agency proposed adjustments to certain RQs and to several administrative reporting exemptions. In addition, the Agency continued updating the Superfund Removal Procedures (SRP) Manual.

### 2.4.1 Reportable Quantity Regulations

Section 102(b) of CERCLA, as amended, sets an RQ of one pound for hazardous substances, except those substances for which different RQs have been established in Section 311(b)4) of the Clean Water Act. Section 102(a) of CERCLA authorizes EPA to adjust RQs for hazardous substances and to designate additional CERCLA hazardous substances.

Under CERCLA Section 103(a), the person in charge of a vessel or facility must immediately notify the National Response Center upon learning of a release of hazardous substance in a quantity that equals or exceeds its RQ. In addition to this reporting requirement, Section 304 of the Emergency Planning and Community Right-to-Know Act of 1986 requires that a release of a hazardous substance in a quantity that equals or exceeds its RQ (or one pound if a reporting trigger is not established by regulation) be reported to state and local authorities.

### Reportable Quantity Adjustments

On October 23, 1993, EPA proposed changes to the designation, RQs, and notification requirements for hazardous substances under CERCLA (58 FR 54836). The Agency took final action on these changes in a final rule dated June 12, 1995 (60 FR 30926). The final rule revised the table of hazardous substances to:

- Add 47 individual Clean Air Act hazardous air pollutants and adjust their statutory one-pound RQs;
- Add five other hazardous air pollutants that are broad generic categories of substances, assigning no RQ to the categories; and
- Add and adjust the RQs for 11 hazardous wastes listed under RCRA.

### **Reportable Quantity Exemptions**

On November 30, 1992, the Agency proposed a rule to codify four administrative reporting exemptions for naturally occurring radionuclide releases from the requirements of CERCLA Section 103. The proposal would exempt such releases from:

- Large, generally undisturbed land holdings, such as golf courses and parks;
- Disturbances of land for purposes other than mining, such as farming or building construction;
- The dumping of coal and coal ash at utility and industrial facilities with coal-fired boilers; and
- Coal and coal ash piles at utility and industrial facilities with coal-fired boilers.

The Agency has determined that administrative reporting requirements related to these releases serve no purpose. The rule is in accordance with the decision of the court in Fertilizer Institute v. United States Environmental Protection Agency 935 F.2d 1303 (U.S.App.D.C. 1991) wherein the court specified that the original promulgation of the exemptions in a final rule (54 FR 22524, May 24, 1989) did not provide sufficient notice and opportunity for public comment. The purpose of the November 30, 1992, proposal was to provide such notice and opportunity for comment. On March 5, 1993, at the request of several parties, the Agency reopened the comment period for an additional 60 days to provide greater opportunity for the public to evaluate the issues.

On August 4, 1995, in response to comments received on the four exemptions, the Agency proposed broader exemptions to the reporting requirements for release of certain naturally occurring radionuclides. In particular, it proposed exemptions for such releases associated with extraction activities of certain kinds of mines, and at coal and coal ash piles at all kinds of sites. At the request of commentors, on October 3, 1995, the Agency extended the comment period on the broader exemptions for an additional 60 days to give the public greater opportunity to evaluate the issues (60 FR 51765).

### 2.4.2 Removal Guidance

The SRP Manual covers all procedural and administrative requirements for removal actions. It is used by OSCs; removal, remedial, and enforcement personnel; and staff from other federal and state agencies. In FY90, EPA began restructuring the manual into a series of 10 stand-alone volumes, each addressing a distinct aspect of Superfund removal actions. previously completed five volumes of the series: Consideration of ARARs During Removal Actions: Removal Enforcement Guidance for On-Scene Coordinators; Public Participation Guidance for On-Scene Coordinators; Action Memorandum Guidance; and Removal Response Reporting: POLREPs (pollution reports) and OSC Reports. During FY95 the Agency initiated work on the remaining five volumes including: Participation in Federal-Lead Removal Actions, Response Management: Removal Action Start-Up to Close-Out, and an overview volume.

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# Chapter 3 Remedial Progress

The Agency's progress during FY95 illustrated its continuing commitment to accelerating and completing cleanups at Superfund sites. The Agency or PRPs started more than 110 remedial actions (RAs) to construct remedies, and completed construction activities to place 68 sites in the construction completion category. To date under the Superfund program, the Agency has placed a total of 346 National Priorities List (NPL) sites in the construction completion category. This chapter describes the remedial progress during the year. Specifically, this chapter provides information on:

- FY95 progress in remediating NPL sites;
- Remedies selected during FY95;
- FY95 results of five-year reviews under CERCLA Section 121(c) at sites where contamination remained after the initiation of the RA;
- FY95 efforts to develop and use innovative treatment technologies, including an evaluation of newly developed and achievable permanent treatment technologies, as required by CERCLA Section 301(h)(1)(D); and
- Other programs to improve remedial efforts at sites.

### 3.1 Remedial Process

The remedial process complements the removal process (see Chapter 2) by addressing more complicated, long-term evaluation and response for hazardous waste sites on the NPL. The remedial process is preceded by the site evaluation process,

which consists of the discovery or identification of a potential site, the preliminary assessment of the site, and the site inspection (SI). During the SI, the site is evaluated for possible listing on the NPL. If a site is listed on the NPL after the SI, the Trust Fund can be used to finance cleanup activities at the site under the remedial authority of CERCLA.

The remedial process to clean up NPL sites is comprised of the following activities:

- The remedial investigation/feasibility study (RI/FS) to determine the type and extent of contamination and to evaluate and develop remedial cleanup alternatives;
- The record of decision (ROD) to identify the remedy selected, based on the results of the RI/FS and public comment on the cleanup alternatives;
- The remedial design (RD) to develop the plans and specifications required to construct the selected remedy;
- The remedial action (RA) to implement the selected remedy, from the start through the completion of construction of the remedy; and
- Operation and maintenance (O&M) to ensure the effectiveness and/or integrity of the remedy. O&M occurs after implementation of a response action.

A Remedial Project Manager (RPM) oversees all remedial activities and related enforcement activities. Regional coordinators at EPA Headquarters assist RPMs by reviewing remedial and enforcement activities and by answering technical and policy questions.

### 3.2 Fiscal Year 1995 Remedial **Progress**

The Agency's progress during the fiscal year in initiating RAs and completing construction activities to classify sites as construction completions indicates its continuing commitment to accelerate the cleanup of NPL sites. By the end of FY95, work had occurred at over 95 percent of the 1,374 NPL sites. In addition, over 88 sites were removed from the NPL. Exhibit 3.2-1 illustrates the status of the work at NPL sites, showing sites by the most advanced stage of activity accomplished. The following sections of this chapter highlight progress made at the sites during FY95.

During FY95, EPA developed a plan to modify the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) to allow for the partial deletion of an NPL site. EPA has been able to

delete releases only after evaluation of the entire site. but the deletion of an entire site does not communicate the successful completion of portions of those sites. EPA expects partial deletions will help promote the economic redevelopment of Superfund sites where potential investors may be reluctant to undertake economic activity at a site listed on the NPL. Partial deletions will be considered when a site meets the standards established in the NCP and both EPA and the state concur.

EPA also produced a draft guidance on conducting removal responses at site where radiation hazards are present. (OSWER Directive #9200.5-144)

#### 3.2.1 **Construction Completions**

Responding to the recommendations of the 1991 30-Day Study and the 1993 Superfund Administrative Improvements Task Force, the Agency has worked to accelerate and complete

472 Proposed NPL Sites 52 Final NPL Sites 1,232 1,284 **Subtotal** 346 Deleted -- Referred to **Another Authority Deleted NPL Sites** 213 Total\* 1,374 169 Includes 162 Federal Facilities 67 Remedy Selected Legis Construction Underway (34.3%) Study Underway (15 5%) Design Underway (12.39%) Dalated ... Referred to Another Evaluation for the real of the state of the Construction Completed yanang Complete (4.5%) 

Exhibit 3.2-1 Work Has Occurred at 95 Percent of the National Priorities List Sites

Source: CERCLIS. October 20, 1995.

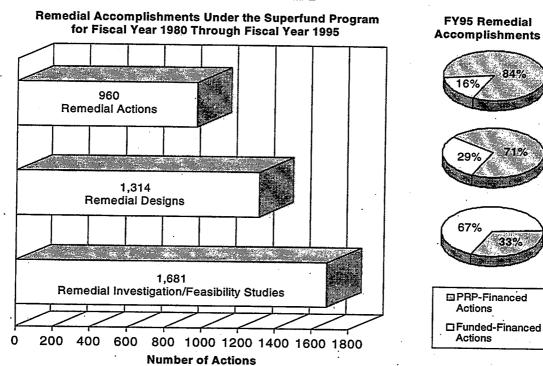


Exhibit 3.2-2

Source: CERCLIS. October 20, 1995.

cleanup at NPL sites. The Agency completed construction activities at 68 sites during FY95, bringing the total number of sites in the construction completion category to 346. This exceeded the FY95 target of 330. More than 80 percent of the construction completions have been achieved in the past four years.

### 3.2.2 New Remedial Activities

As shown in Exhibit 3.2-2, the Agency or potentially responsible parties (PRPs) had undertaken approximately 1,681 RI/FSs, 1,314 RDs, and 960 RAs since the inception of the Superfund program through the end of the FY95.

The remedial activities started during FY95 reflect the Agency's continued emphasis on accelerating the pace of cleanup and focusing resources on RAs. New remedial activities undertaken during the fiscal year include:

RI/FS Starts: The Agency or PRPs started nearly 30 RI/FSs during FY95, including 10 (33

percent) financed by EPA and 20 (67 percent) financed by PRPs. For comparison, in FY94 the Agency or PRPs started nearly 70 RI/FSs, including nearly 40 (60 percent) financed by EPA and more than 30 (40 percent) financed by PRPs.

RD Starts: The Agency or PRPs started 84 RDs during FY95, including 24 (29 percent) financed by EPA and 60 (71 percent) financed by PRPs. For comparison, in FY94 the Agency or PRPs started approximately 110 RDs, including nearly 30 (25 percent) financed by EPA and more than 80 (75 percent) financed by PRPs.

RA Starts: The Agency or PRPs started more than 110 RAs during FY95. EPA was financing 18 (16 percent) and PRPs were financing more than 92 (84 percent). For comparison, in FY94, the Agency or PRPs started more than 120 RAs, including approximately 30 (20 percent) financed by EPA and more than 90 (80 percent) financed by PRPs.

Exhibit 3.2-3
Projects in Progress at National Priorities List Sites by Lead for Fiscal Year 1994 and Fiscal Year 1995

	RI/FS		RDs		RAs	
	FY94	FY95	FY94	FY95	FY94	FY95
Fund-Financed State-Lead	19	15	26	18	28	37
Fund-Financed — Federal-Lead <sup>1</sup>	155	135	105	89	96	100
Fund-Financed—EPA Performs Work at Site <sup>2</sup>	10	9	4	4	2	2
PRP-Financed and PRP-Lead	176	179	237	218	215	241
Mixed FundingMonies from Fund and PRPs	1 .	3	. 2	1	. 7	4
PRP-Financed—State Order and EPA Oversight <sup>3</sup>	26	23	15	12	24	26
State Enforcement	2	2	2	1	0	0.
Federal Facility	484	470	56	70	75	106
•			•			
Total	873	836	. 447	413	447	516

- Includes remedial program-lead projects and enforcement program-lead projects.
- <sup>2</sup> Projects at which EPA employees, rather than contractors, perform the site cleanup work.
- Projects where site cleanup work is financed and performed by the PRPs under state order, with EPA oversight.

Sources: Progress Toward Implementing Superfund: FY94 (Appendices A and B) and FY95 (Appendices A and B).

3.2.3 Status of Remedial and Enforcement Activities in Progress

At the end of FY95, 1,765 RI/FS, RA, and RD projects were in progress at 854 sites. For comparison, at the end of FY94, 1,767 RI/FS, RA, and RD projects were in progress at 867 sites. Projects in progress at the end of FY95 included 1,352 RI/FS and RA projects and 413 RD projects. As required by CERCLA Sections 301(h)(1)(B),(C), and (F), a listing of the RI/FS and RA projects in progress at the end of FY95 is provided in Appendix A, along with a projected completion schedule for each project. A listing of all RDs in progress at the end of FY95 is provided in Appendix B.

Of the 1,352 RI/FS and RA projects in progress at the end of FY95, over 60 percent were on schedule, ahead of schedule, started during the fiscal year, or had no previously published completion schedule, and less than 40 percent were behind

schedule. These projects include 434 on schedule, 30 ahead of schedule, 238 started during the fiscal year, 127 that had no previously published completion schedule, and 529 that were behind schedule. Exhibit 3.2-3 compares the number of projects in progress at NPL sites at the end of FY94 with the number in progress at the end of FY95, by lead.

PRPs were conducting 420 of the RI/FS and RA projects in progress at the end of FY95, including 179 RI/FSs and 241 RAs. Of these 420 PRP-financed projects, over 60 percent were on schedule, ahead of schedule, started during the fiscal year, or had no previously published completion schedule, and less than 40 percent were behind schedule. Projects include 97 on schedule, 7 ahead of schedule, 103 started during the fiscal year, 52 that had no previously published completion schedule, and 161 that were behind schedule.

### 3.2.4 Remedy Selection

The Agency signed 187 RODs in FY95, including 52 new and amended RODs for PRP-financed sites, 53 RODs for Fund-financed sites, 82 RODs for federal facility sites. For comparison, in FY94 159 RODs were signed, including 58 new and amended RODs for PRP-financed sites, 43 RODs for Fund-financed sites, 60 RODs for federal facility sites. The ROD documents the results of all studies performed on the site, identifies each remedial alternative that the Agency considered, and explains the basis for selecting the remedy. The ROD is signed after the RI/FS is completed and the public has had the opportunity to comment on the remedial alternatives that are being considered to clean up the site.

The Agency selected a variety of remedies in FY95 RODs, based on a careful analysis of characteristics unique to each site and the proximity of each site to people and sensitive environments (wetlands and endangered wildlife are examples of environmental resources that are taken into consideration when evaluating remedies). Congress, with the enactment of SARA, indicated that EPA should give preference to permanent remedies, such as treatment, rather than temporary remedies, such as containment.

A complete list of the 187 RODs signed during FY95 is provided in Appendix C. To fulfill the statutory requirement of CERCLA Section 301(h)(1)(A) to provide an abstract of each feasibility study (i.e., ROD), the National Technology Information Services (NTIS) can provide requested RODs. Appendix C provides detailed information on how to make these ROD requests.

### 3.3 Remedy Improvement Programs

In addition to selecting remedies in the RODs, EPA undertakes numerous programs to facilitate remedy implementation and to encourage the use of innovative technologies at NPL sites that are better, faster, and more cost-effective than available technologies. These include the Superfund Innovative Technology Evaluation (SITE) program, the Superfund Technical Assistance Programs, the Technology Transfer and Interagency Coordination

Programs, and other programs. The FY95 accomplishments of these programs are detailed in the sections below.

### 3.3.1 Superfund Innovative Technology Evaluation (SITE) Program

The SITE program was established more than nine years ago to encourage the development and implementation of innovative treatment technologies for hazardous waste site remediation. Development of this program was in direct response to the legislative mandate under the 1986 Superfund Amendments and Reauthorization Act (SARA). SITE is the pioneer program in testing and evaluating innovative treatment technologies.

Exhibit 3.3-1 displays three of the four components of the program with the number of FY95 accomplishments. Under the fourth component, Technology Transfer, more than 467,000 SITE documents were distributed to industry, consulting firms, and state and federal agencies.

Exhibit 3.3-1				
FY95 SITE Program Accomplishments	>			

•	FY95 Projects	Cumulative Projects
Demonstration Program	11	82
Emerging Technology	4	•
Program	11	53
Characterization and		
Monitoring Program	7	31

To fulfill the statutory requirement of CERCLA Section 301(h)(1)(D) to provide an evaluation of newly developed feasible and achievable permanent treatment technologies, a summary of each project is provided in *The Superfund Innovative Technology Evaluation Program Annual Report to Congress, FY 1995* (EPA/540/R-97/500), December 1995.

## 3.3.2 Superfund Technical Assistance Programs

Superfund projects require broad technical knowledge and expertise. To provide multidisciplinary expertise and technical support for Superfund cleanups, the Agency sponsors the Technical Support Centers (TSCs) and the Ground-Water, Engineering, and Federal Facilities Forums. The goals of these technical assistance programs are to increase the speed and quality of Superfund cleanups, reduce cleanup costs, address technical issues encountered in site cleanup, and provide Regional Superfund staff with direct access to the technical expertise and resources of the Agency's researchers.

## Technical Support Centers and Superfund Technical Assistance Response Team

In FY95, the Agency funded five TSCs at five ORD laboratories. ORD also sponsored the START program. The purpose of the TSCs and the START program is to provide site-specific technical assistance in the areas of release response, site characterization, human health risk assessment, ecological assessment, radiological evaluation, ground-water remediation, and engineering. The TSCs and START program are invaluable to the Agency's Superfund effort, fulfilling a critical niche in developing and delivering the best expertise available in support of faster, better, and more cost-effective cleanups. The TSCs funded in FY95 are listed below. Annual funding totaled \$2.4 million.

- Monitoring and Site Characterization TSC: ORD-Environmental Monitoring Systems Laboratory – Las Vegas, Nevada
- Health Risk Assessment and Toxicology TSC:
   ORD-Environmental Health and Criteria Office
   Cincinnati, Ohio
- Ecological Assessment TSC: ORD-Environmental Monitoring Systems Laboratory – Cincinnati, Ohio
- Ground-Water Characterization and Remediation TSC: ORD-R.S. Kerr Environmental Research Laboratory – Ada, Oklahoma
- Engineering and Treatment TSC: ORD-Risk Reduction Engineering Laboratory (RREL) – Cincinnati, Ohio

RREL also sponsors the START program, which provides intensive, long-term, site-specific technical and engineering support to provide better, faster, and more cost-effective remediation at Superfund sites with difficult engineering problems or sites of national significance. Sites admitted into the START program are nominated by EPA's Regional offices.

## Ground-Water, Engineering, and Federal Facility Forums

The Ground-Water, Engineering, and Federal Facility Forums are regional volunteers who share a common concern of, and commitment to, EPA consistency in the type and quality of information needs for hazardous site remediation. They discuss technical and policy issues in monthly conference calls and meet once or twice a year (usually jointly with other federal agencies) to discuss technical issues representatives of the ORD TSCs and Headquarters' program offices.

The Forums held two joint annual meetings, one in January in Las Vegas, and the second in Boston in June. The latter was attended by almost 100 federal remediation professionals. Some of the activities in which the Forums participated in FY95 include: initiation and review of five technical issue papers; review of EPA and Air Force Remedial Design/Remedial Action handbooks; development and participation in Federal Facility Remediation training; planning and application of the Soil Vapor Extraction Thermal Desorption Field Experiences project; and participation in the DoD-sponsored Bioremediation of Explosives Workshop.

## 3.3.3 Technology Transfer and Interagency Coordination Programs

TIO, as a producer of technological information, is widely recognized as a leader in the technology innovation arena. Since its creation in 1990, TIO has identified, cataloged, and disseminated information to users related to technology demonstration and use, markets, procurement, and support services.

TIO also has brought federal agencies, academics, and the private sector together to demonstrate and evaluate technologies, and to remove impediments to their use. TIO has

established a national center to promote the use of innovative technologies to clean up contaminated groundwater. The following sections detail FY95 technology transfer and interagency information sharing efforts, including forums and conferences, demonstrations and evaluations of innovative technologies, reference materials, and training and continuing education opportunities.

### Innovative Technology Forums and Conferences

To encourage collaborative efforts across EPA, other federal agencies, academics, and the private sector, EPA sponsored forums, conferences, and a center for exchanging information on innovative technologies. The Agency also participated in international information exchanges.

Ground-Water Remediation Technologies Analysis Center (GWRTAC): In FY95 TIO established this center through a three-year cooperative agreement to enhance information exchange between groundwater technology developers and users by: improving understanding and use of innovative ground-water technologies; supporting a broad range of audiences needing access to technology information; and serving as the focal point for information transfer between developers and users. GWRTAC activities include monitoring the state of development of groundwater remediation technologies, compiling current data; analyzing data to identify trends and to provide technology summaries; and distributing the information in hard-copy and electronic form world-GWRTAC is operated by the National wide. Environmental Technologies Applications Center, in association with the University of Pittsburgh's Environmental Engineering Program.

**Federal Remediation Technologies Roundtable**: Through this forum, TIO provides an information exchange network for federal agencies that are conducting applied research and developing innovative remediation techniques. In FY95, the Roundtable published 37 remediation case studies in four volumes (Bioremediation; Ground Water; Soil Vapor Extraction; and Thermal Desorption, Soil Washing and In Situ Vitrification) and a guide to documenting cost and performance. The latter set

forth, for the first time, a set of standard data elements that federal agencies agree to collect on full-scale use of cleanup technologies. The Roundtable also published a fact sheet, Federal Remediation Technologies Roundtable: 5 Years of Cooperation, and an update of Federal Publications on Alternative and Innovative Treatment Technologies for Corrective Action and Site Remediation, Fifth Edition.

Marketplace Conferences: The purpose of these conferences is to highlight business opportunities and markets for vendors and developers of innovative treatment technologies. The conferences bring together top-level state, EPA, DoD, DOE, and Department of Commerce officials with business executives from technology firms. In FY95 TIO held two conferences, one in Denver in November 1994 and the second in Atlanta in July 1995. Several hundred attendees came to both events.

International Efforts: TIO participated in the NATO-CCMS Pilot Study, a joint effort with 13 country participants to exchange information on innovative technologies to clean up sites. On behalf of the study, TIO published an Interim Status Report document to make results available on a more timely basis.

## Efforts to Demonstrate and Evaluate Innovative Treatment Technologies

To encourage increased use of innovative treatment technologies, TIO improved the documentation of cost and performance data for innovative treatment technologies, described under the FRTR, above. TIO also engaged in two collaborative efforts among government agencies, research organizations, and the private technology user industry to jointly develop, implement, and evaluate innovative technologies.

The Clean Sites Public-Private Partnership is led by Clean Sites, Inc., a non-profit public interest and research organization, under a cooperative agreement with TIO. The technologies in this program are generally past the research and development stage. In FY95 six technology evaluation partnership projects were underway:

McClellan Air Force Base, California; Pinellas DOE Plant, Florida; Mound DOE Facility, Ohio; Massachusetts Military Reservation/Otis Air National Guard Base, Massachusetts; Lasagna Project (DOE); and Naval Air Station, North Island, California.

Technologies evaluated under the Remedial Technologies Development Forum (RTDF) are in earlier research and development stages. In FY95, there were four action teams dealing with separate remediation areas: Lasagna<sup>TM</sup> partnership, Permeable Barriers Action Team, INERT Soil-Metals Action Team, and the Bioremediation Consortium.

### **Reference Materials**

To encourage use of innovative technologies, the Agency provides and maintains a variety of reference materials on the technologies. Examples include electronic sources of information on innovative treatment technologies, hard copy publications, and traveling information booths.

### **Electronic Information**

The Agency currently sponsors a variety of electronic sources of information on innovative treatment technologies. In August 1995, TIO introduced VISITT version 4.0 with 325 technologies from 204 vendors and the ability to download the database from the CLU-IN bulletin board and America On-Line as a way to reduce printing and distribution costs. CLU-IN served 7,000 users this year. The second version of BFSS, which contains site specific data on the bench, pilot and full scale use of bioremediation, was released by ORD.

### **Publications**

TIO also has developed several publications that provide information on new developments and applications of innovative treatment technologies:

The Innovative Treatment Technologies: Annual Status Report provides technical background information and information on the selection and use of innovative treatment technologies at Superfund

sites. The 7th Edition was published in September 1995, and tracks almost 300 innovative technology projects. A supplemental database containing site-specific data on each innovative project is planned for FY96.

Tech Trends and Ground Water Currents are two newsletters distributed by TIO. These newsletters are published quarterly and are distributed to interested subscribers, including federal and state project managers, consulting engineers, academics, and technology users. In FY95, TIO published three issues of TechTrends and four issues of Ground Water Currents.

Abiotic Groundwater Remediation Technologies Reports are six mini-reports issued in FY95 on the latest emerging technologies for dense nonaqueous phase liquids (DNAPLs) and metals in groundwater. The reports address permeable treatment walls, surfactant flushing, electrokinetics, cosolvents, thermal enhancements, and hydraulic/pneumatic fracturing.

Resource Guides are annotated bibliographies published by TIO for specific technologies. One resource guide was complete in FY95: The Soil Vapor Extraction (SVE) Enhancement Technology Resource Guide.

### **Traveling Information Booths**

TIO also sponsored several traveling information booths that were sent to hazardous waste remediation conferences and other meetings around the country. These displays were major outlets for dissemination of EPA materials and database information on innovative remediation technologies. In FY95, the booth traveled to over 20 venues including state meetings and technical conferences.

### **Training and Continuing Education**

In FY95, the Agency sponsored efforts to develop training resources and materials on technologies and site remediation.

The CERCLA Education Center (CEC) (operated by TIO) provides job-related training to the Superfund workforce nationwide. Since its

establishment in 1991, the CEC has trained close to 2,500 participants (63 percent EPA, 27 percent states, and 10 percent other federal agencies). More than 800 students have had direct responsibility for assessment, removal, or remedial activities at contaminated sites. In FY95, the CEC offered eight courses in North Carolina and opened a Western center (at existing facilities at the National Enforcement Training Institute in Denver) that offered five courses. The CEC gave a special innovative technology workshop at the request of New England Waste Management Officials with over 70 attendees.

OSWER, in cooperation with the American Association of Environmental Engineers, continued work on monographs that detail specific innovative technologies. These monographs provide information to consulting engineers and other potential users about the use of state-of-the-art technology. Eight monographs have been published in FY95.

## 3.4 Report on Facilities Subject to Review Under CERCLA Section 121(c)

Certain remedies, such as containment remedies, allow hazardous substances, pollutants, or contaminants to remain on site if they do not pose a threat to human health or the environment. CERCLA Section 121(c), as amended by SARA, requires that any post-SARA remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site be reviewed at least every five years after the initiation of such remedial action. Such reviews assure that human health and the environment are being protected by the selected remedial action being implemented. These five-year reviews are referred to as "statutory" reviews. Section 121(c) requires the Agency to report to Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result.

As a matter of policy, EPA also conducts a fiveyear review for sites where hazardous substances, pollutants, and contaminants will not remain on site upon completion of the remedy, but where the remedy will take longer than five years. These policy reviews are conducted every five years until the remedial action is complete and achieves cleanup levels that allow for unlimited use and unrestricted exposure. Additionally, at least one policy review is conducted for pre-SARA sites where upon attainment of the ROD cleanup levels, the remedial action will not allow for unlimited use and unrestricted exposure.

"Policy" reviews were announced in Office of Solid Waste and Emergency Response (OSWER) Directive 9355.7-02, May 23, 1991, Structure and Components of Five-Year Reviews. Guidelines for the conduct of five-year reviews were further articulated in two supplemental directives in 1994 and 1995. The determination of whether a site requires a statutory or policy five-year review is generally made based on information provided in the ROD.

FY95 was the fifth year in which sites were eligible for five-year review. Headquarters data indicated that a total of 27 sites required five-year reviews in FY95. A total of 37 five-year reviews were completed in FY95, as illustrated in Exhibit 3.4-1. Thirteen of the 37 reviews were due in prior fiscal years. Nineteen reviews were completed early, and were due in later fiscal years. Headquarters data initially suggested that one review was not required. However, the Region identified this site, New Castle Steel, as requiring a review and submitted a report.

Of the 37 sites that were reviewed during FY95, 22 required statutory reviews and 15 required policy reviews. EPA determined that the remedies continue to protect human health and the environment at 32 of the 37 sites. Ongoing remedies are included among those considered protective. For the remaining five sites, the review report either did not make a determination on protectiveness or stated that remedies do not currently protect human health and the environment. The five sites are addressed below:

1) The Charles George Reclamation Landfill report noted that further analysis is required for some remedial actions at the site. The report further noted that the five-year review did not determine whether the current risk falls within an acceptable range, and that changing regulatory standards and changing site conditions may necessitate an upgrade to the remedy.

- 2) The TRW Minerva report stated that the onsite disposal cell appears to be meeting the objectives of the Consent Agreement, but that the groundwater pump-and-treat system requires modifications to provide adequate protection.
- 3) The Waite Park Water Supply report recommended further evaluation of the effectiveness of the groundwater pump-and-treat system, and modifications if found inadequate.
- 4) No five-year review was required at the New Castle Steel site, because a no action ROD was signed in 1988, in which no remedy was selected under CERCLA section 121. However, the report reviewed the "Recommendations Outside the Scope of the ROD" that were originally detailed in the ROD. These recommendations included closure requirements to be enforced by the state. The report documented a change in projected land use to residential, and stated that EPA has concerns over the potential exposure of waste materials to construction workers and future residents. Other issues discussed included potential toxic conditions in the eastern disposal area and the observation of black residue in the eastern and western disposal areas. The report recommended limiting the use of shallow groundwater by residential developments, sampling subsurface soils prior to any residential or industrial development, and closure in accordance with state regulations.
- 5) The West Virginia Ordnance Works report stated that the remedy is not at this time protective of human health and the environment. The remedy will be protective once necessary actions are taken, but at the time of the report the remedy was judged not protective because of problems including erosion of roads and cap areas, overgrowth, and drainage problems. In addition, sampling will be done to determine if the caps are effective and if contamination is migrating.

Exhibit 3.4-1
Sites at Which Five-Year Reviews, Required Under CERCLA
Section 121(c), Were Conducted During Fiscal Year 1995

Region	State	Site Name	Review Date	Туре
1	MA	Cannon Engineering Corp. <sup>1</sup>	6/29/95	Statutory
1	MA	Charles-George Reclamation Trust LF <sup>2</sup>	9/7/95	Statutory
3	PA	Douglassville Disposal <sup>3</sup>	1/10/95	Statutory
3	PA -	Lackawanna Refuse <sup>2</sup>	9/28/95	Policy
3	PA	McAdoo Associates <sup>2</sup>	12/28/94	Policy
3	DE	New Castle Steel <sup>4</sup>	3/20/95	Policy ·
3	W۷	West Virginia Ordnance <sup>3</sup>	1/30/95	Statutory
3	PĄ	Whitmoyer Laboratory (OU3) <sup>2</sup>	3/31/95	Statutory
4	TN	American Creosote Works (Jackson Plant) 3	1/25/95	Statutory
4	F	Brown Wood Preserving <sup>2</sup>	3/30/95	Policy
4	FL	Gold Coast Oil Corp. 3	1/25/95	Statutory
4	AL.	Perdido Groundwater Contamination Site <sup>2</sup>	5/16/95	Policy
4	sc	SCRDI Dixiana <sup>2</sup>	9/29/95	Policy
5	IL	Belvidere Municipal Landfill #1 1	6/27/95	Statutory
5	MN	NL Industries/Taracorp/Golden Auto <sup>2</sup>	3/15/95	Policy
5	МІ	Northernaire Plating Company <sup>2</sup>	9/28/95	Statutory
5	MI	Southwest Ottawa County Landfill <sup>2</sup>	9/25/95	Policy
5	MN	St. Regis Paper Company <sup>2</sup>	4/6/95	Policy
5	ОН	TRW Inc. (Minerva Plant) <sup>2</sup>	7/10/95	Policy
5	MN	Waite Park Water Supply <sup>3</sup>	3/30/95	Statutory
5	MN	Windom Municipal Dump <sup>3</sup>	2/9/95	Statutory
6	TX	Bio-Ecology Systems, Inc. <sup>2</sup>	12/5/94	Policy
6	TX	Crystal City Airport <sup>1</sup>	3/7/95	Statutory
6	TX	French Limited <sup>3</sup>	1/9/95	Statutory
7	KS	Cherokee County <sup>2</sup>	9/28/95	Statutory
7	IA	John Deere (Dubuque Works) <sup>3</sup>	9/22/95	Statutory
7	IA	Lawrence Todtz Farm <sup>3</sup>	9/25/95	Statutory
8	МТ	Anaconda Co. Smelter <sup>3</sup>	11/23/94	Statutory
8	со	Broderick Wood Products (Amendment) <sup>2</sup>	3/23/95	Statutory
. 8	MT	Libby Groundwater <sup>3</sup>	1/27/95	Statutory
8	со	Sand Creek Industrial <sup>1</sup>	9/28/95	Statutory
9	CA	Applied Materials <sup>2</sup>	4/28/95	Policy
9	CA	Fairchild Semiconductor (South San Jose Plant) <sup>2</sup>	. 3/13/95	Policy
9	CA	Firestone Tire (Salinas Plant) <sup>2</sup>	11/16/94	Policy
9	CA	Intersil Inc./Siemens Components <sup>2</sup>	9/28/95	Policy
9	CA	Operating Industries Inc. Landfill #2 3	6/21/95	Statutory
10	OR	Martin-Marietta Aluminum Co. 3	12/28/94	Statutory

<sup>1)</sup> Due in FY95; 2) Early -- due after FY95; 3) Late -- due prior to FY95; 4) Review not previously required.

Source: Five-Year Review Program Implementation and Management System

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# Chapter 4 Enforcement Progress

The Agency's enforcement goals are to:

- Maintain high levels of PRP participation in conducting and financing cleanups through use of EPA's statutory authority;
- Ensure fairness and equity in the enforcement process; and
- Recover Superfund monies expended by EPA for response actions.

FY95 accomplishments illustrate the continuing success of EPA's Superfund enforcement efforts. EPA achieved enforcement agreements worth more than \$1.4 billion in PRP response work. PRPs financed approximately 75 percent of the remedial designs (RDs) and remedial actions (RAs) started during the fiscal year. Through its cost recovery efforts, EPA achieved approximately \$206 million in settlements and collected more than \$200 million for reimbursement of Superfund expenditures.

Under the Superfund Administrative Reforms initiative, EPA advanced toward its goal of ensuring fairness in the enforcement process by reducing transaction costs and accelerating the pace of cleanups. FY95 saw the postponement of Superfund reauthorization legislation in the 103rd Congress. EPA is using its administrative authority to implement a number of the most promising proposals from the draft legislation. In May 1995, EPA announced a series of Administrative Reform efforts that included increasing the use of allocation tools, encouraging early settlements with de minimis and "de micromis" parties, fostering greater fairness for owners and prospective purchasers of Superfund sites, and using enforcement discretion to promote

fairness and flexibility in settlements. Guidance documents issued during FY95 detail EPA's specific approaches to enforcement fairness.

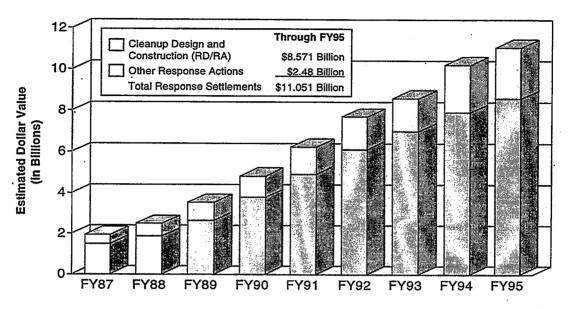
### 4.1 The Enforcement Process

The Superfund program integrates enforcement and response activities. To initiate the enforcement process, EPA identifies PRPs, notifies them of their potential liability, and seeks to negotiate an agreement with them to perform or pay for the If agreement is reached, the Agency oversees the work performed under the legal settlement. If the PRPs do not settle, EPA may issue a unilateral administrative order (UAO) compelling them to perform the cleanup. If PRPs do not comply with the UAO, EPA may conduct the cleanup using Superfund monies and later pursue a cost recovery action against the PRPs. These steps are fundamental for obtaining PRP involvement in conducting response activities and recovering expended Trust Fund monies. The Superfund enforcement process is explained in more detail below.

When a site is being proposed for the National Priorities List (NPL), or when a removal action is required, EPA conducts a PRP search to identify parties who may be liable for site cleanup and collect evidence of their liability. PRPs include present and past owners or operators of the site, generators of waste disposed of at the site, and transporters who selected the site for the disposal of hazardous waste.

EPA notifies parties of their potential liability for future cleanup work and any past response costs incurred by the government, thus beginning the

Exhibit 4.2-1
Cumulative Value of Response Settlements
Reached With Potentially Responsible Parties



Source: CERCLIS. October 20, 1995.

negotiation process between the Agency and the PRPs.

EPA encourages PRPs to settle with the Agency and undertake cleanup activities, specifically to start removal actions, remedial investigation/feasibility studies (RI/FSs), or remedial design/remedial action (RD/RA). If PRPs are willing and capable of doing the response work, the Agency will attempt to negotiate an agreement allowing the PRPs to conduct and finance the proposed work and reimburse past government costs. For RD/RA, the settlement must be in the form of a judicial consent decree (CD) that is lodged with a court by the Department of Justice (DOJ). For other types of response actions, the agreement may be in the form of a CD or an administrative order on consent (AOC) issued and signed by the EPA Regional Administrator. Both agreements are enforceable in a court of law. Under either agreement, PRPs conduct the response work under EPA oversight. PRPs who settle may later seek contribution toward the cost of the cleanup from non-settling PRPs by bringing suit against them.

If negotiations do not result in a settlement. CERCLA Section 106 provides EPA with the authority to issue a UAO requiring the PRPs to conduct the cleanup; EPA may also bring suit through DOJ to compel PRPs to perform the work. If the Agency issues a UAO and the PRPs do not comply, the Agency again has the option of filing a lawsuit to compel the performance specified in the order or to perform the work itself and then seek cost recovery and treble damages. Where the PRP notifies EPA in writing of its intent to comply with a UAO, EPA classifies the UAO as a settlement. Although UAOs in compliance are technically not legal settlements, they are counted as such programmatically because they result in PRPs performing response work.

If a site is cleaned up using Superfund monies, DOJ will file suit on behalf of EPA, when practicable, to recover monies spent. Many of these suits to recover past costs will also include EPA claims for estimated future costs. Any sums

recovered from the PRPs are returned to the Trust Fund.

### 4.2 Fiscal Year 1995 Superfund Enforcement Progress

FY95 progress reflects the continuing success of Superfund enforcement efforts in securing PRP participation in Superfund cleanups and recovering Trust Fund monies expended by EPA in its response efforts.

### 4.2.1 Settlements for Response Activities

During FY95, the Agency reached 222 settlements (CDs, AOCs, or UAOs in compliance) with PRPs for response activities worth over \$851 million. As shown in Exhibit 4.2-1, the cumulative value of PRP response settlements achieved under the Superfund program exceeds \$11 billion. Of the 222 settlements achieved in FY95, 77 settlements worth almost \$671 million were for RD/RA. These RD/RA settlements included 40 CDs referred to DOJ

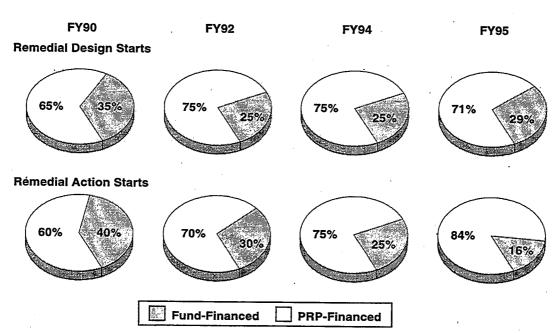
for approximately \$362 million, 6 AOCs for almost \$2.3 million, and 31 UAOs in compliance for more than \$306.5 million. These RD/RA settlements include 57 RD/RA negotiations started and 92 RD/RA negotiations completed by EPA during the fiscal year.

During FY95, the Agency issued 94 UAOs, including 37 for RD/RA. The Agency also signed 163 AOCs. The 94 UAOs issued and the 163 AOCs signed include agreements for removal actions, RI/FSs, RD, and RD/RA.

### 4.2.2 PRP Participation in Cleanup Activities

Exhibit 4.2-2 illustrates the continuing high level of PRP participation in undertaking and financing RDs and RAs since the implementation of the "Enforcement First" initiative in 1989. In FY95, PRPs continued to finance and conduct a high percentage of the remedial work undertaken at Superfund sites: 71 percent of new RDs (exceeding the FY95 target by 15 percent), 84 percent of new

Exhibit 4.2-2
Percentage of Remedial Designs
and Remedial Actions Started by PRPs



Source: CERCLIS. October 20, 1995.

2,800 Estimated Dollar Value of Cost Recovery 2,400 2,000 (in Millions) 1,600 Settlements \$1,600M 1,200 800 400 **FY95 FY94 FY93 FY88 FY89 FY90 FY87** 

Exhibit 4.2-3
Cumulative Value of Collected Cost Recovery Dollars and Negotiated Settlements

Source: CERCLIS. October 20, 1995.

RAs (exceeding the FY95 target by 11 percent), and 67 percent of new RI/FSs (exceeding the FY95 target by 11 percent).

### 4.2.3 Cost Recovery Achievements

EPA and DOJ reached 220 settlements worth more than \$160 million through pursuit of cost recovery actions. These included 184 CERCLA Section 106/107 or Section 107-only cost recovery actions each valued at \$200,000 or more. FY95 cost recovery settlements represent 10 percent of the total \$1.6 billion achieved in cost recovery settlements since the inception of Superfund. More than 60 percent of the total \$1.6 billion has been recovered in the past five years. Exhibit 4.2-3 illustrates cost recovery settlements collected to date.

EPA collected over \$254 million from cost recovery settlements, bankruptcy settlements, and other sources during the fiscal year. This sum is more than 21 percent of the approximately \$1.2

billion collected by EPA to date; more than 77 percent of that \$1.2 billion has been collected in the past five years.

## 4.2.4 Success in Reaching and Enforcing Agreements with PRPs

During FY95, the EPA Offices of Regional Counsel and Regional Waste Management Divisions, working in conjunction with the Office of Enforcement and Compliance Assurance (OECA) and DOJ, entered into numerous enforcement agreements with PRPs. Exhibit 4.2-4 highlights a cross-section of the most significant enforcement settlements reached during the fiscal year.

### 4.3 Enforcement Initiatives

At 15 years old, the Superfund enforcement program is mature and effective at reaching settlements with PRPs to conduct cleanups or reimburse EPA for cleanup costs. Superfund

enforcement, however, has also been criticized for lacking fairness, taking too long, and costing too much. EPA is aware of these difficulties with the Superfund enforcement process and has used Administrative Reforms to undertake a number of initiatives to address them.

Fairness. Enforcement fairness was the rallying cry of the Superfund enforcement program for FY95. EPA's Office of Site Remediation Enforcement (OSRE) initiated a number of pilot projects and published guidance and policies designed to promote enforcement fairness. First, EPA Administrative Reforms to step up its use of alternative dispute resolution to settle difficult Superfund issues expeditiously and more fairly. Second, EPA initiated the allocation pilot project, in which a neutral, third-party allocator assigns PRP's liability and responsibility for cleanup costs based on their "fair share" of the waste contributed. Further, guidance on prospective purchaser agreements and owners of property with contaminated aquifers will help interested parties to acquire and redevelop contaminated properties without fear of Superfund liability. Guidance on supplemental environmental projects will enhance access to this mechanism for responsible parties to reduce their Superfund liability in exchange for performing environmentally beneficial projects. Finally, continuing emphasis on environmental justice in Superfund enforcement protects at-risk communities from disproportionate adverse effects of Superfund sites and increases grass-roots participation in Superfund enforcement.

Reducing Transaction Costs. EPA's Superfund enforcement initiatives for FY95 also focused on identifying and implementing procedures for reducing the time and costs associated with Superfund enforcement. The allocation pilot project has adopted timelines from proposed Superfund reauthorization legislation that should result in PRP and cost-share liability being determined within nine months of the beginning of allocation negotiations. Further, new techniques in PRP searches initiated under Administrative Reforms have resulted in quicker and more complete identification of PRPs at Superfund sites.

These enforcement initiatives are described further below.

## 4.3.1 Increased Use of Alternative Dispute Resolution

Using alternative dispute resolution (ADR) in environmental enforcement has been EPA policy since 1987. FY95 saw EPA continuing to make great strides toward expanding the use of ADR mechanisms in Superfund and other EPA enforcement actions. EPA is committed to using ADR to increase enforcement fairness and reduce enforcement-related transaction costs and litigation. Progress was made during FY95 on every aspect of the ADR program, including case development, provision of ADR support services, and ADR training.

### **ADR Case Development**

During FY95, ADR mechanisms were used to resolve Superfund enforcement negotiations at a number of sites. EPA Regional office personnel initiated the use of ADR mechanisms at 16 sites, and PRP-initiated allocation efforts were coordinated with OSRE at an additional 25 sites. EPA Regional offices continue to support PRPs using ADR to assist Superfund settlements. By the end of FY95, all 10 EPA Regional offices had either used ADR mechanisms in settlements or supported their use.

### **Providing ADR Support Services**

During FY95, the national network of EPA Regional and Headquarters ADR specialists continued its efforts to implement EPA's policy of routinely considering and appropriately using ADR in all enforcement and site-related disputes. The members of the ADR network, comprised of ADR-experienced staff in EPA Regional and Headquarters offices, serve as consultants to EPA and DOJ staff on the use of ADR in enforcement actions.

In May 1995, OSRE published the fact sheet *Use* of Alternative Dispute Resolution in Enforcement Actions. This fact sheet answers many of the most common questions about using ADR to help resolve enforcement negotiations. The fact sheet defines ADR, details EPA's experience with ADR, discusses ADR's benefits, describes procedures for using ADR in enforcement actions, and provides names and contact numbers of the ADR network specialists.

The sheet was widely distributed, including publication in BNA's *Environment Reporter*, thereby increasing awareness of ADR in government and among the regulated community.

Other progress was made during FY95 in educating the regulated community on EPA's support for ADR and the potential for using ADR to reduce private and government Superfund enforcement transaction costs. Members of the ADR Specialists Network made presentations and provided consultation services on effective ADR use to numerous professional and PRP organizations, including the American Bar Association (ABA), Center for Public Resources (CPR), Information Network for Superfund Settlements (INSS), Society of Professionals in Dispute Resolution (SPIDR), and several federal and state agencies, including the Florida Department of Environmental Protection.

### **ADR Training**

In November 1994, EPA's ADR Program sponsored a conference in conjunction with Region 1 and the National Corporate Counsel Association on effective use of ADR in environmental disputes, including Superfund settlements. The two-day conference, held in Boston, brought over 100 together corporate executives with management of EPA Regions and Headquarters and the Department of Justice to discuss strategies for using ADR to solve enforcement disputes. The conference received outstanding reviews from participants, and several ADR cases have developed as a result of the conference.

ADR training was provided to all EPA Regional and Headquarters Superfund offices during FY95. An intensive, one-day training program was designed for legal and program staff who participate in enforcement settlement activities. ADR Users Training, taught jointly by EPA ADR staff and ADR professionals who have served as mediators in Superfund cases, concentrates on the difficulties inherent in enforcement negotiations and how ADR can facilitate resolution of enforcement disputes.

### 4.3.2 The Allocation Pilot Project

During FY95, EPA initiated the allocation pilot project. Designed to respond to criticism that current Superfund allocation methods lack fairness, the allocation pilot project is testing an approach to allocating responsibility that is based on a party's "fair share" of cleanup costs. The pilot project is patterned after allocation methods detailed in proposed Superfund reauthorization legislation, and has adopted the legislation's timelines for allocations.

PRPs at seven Superfund sites have agreed to participate in the allocation pilot project. A neutral allocator, selected jointly by the PRPs and EPA, will conduct a non-binding, streamlined, out-of-court allocation, and assign shares of responsibility for cleanup costs among all the parties at each site. EPA expects to pay the shares of defunct or insolvent (orphan) parties.

In May 1995, EPA placed an announcement in the Commerce Business Daily requesting criteria packages from individuals interested in serving as neutral allocators for the allocation pilot project. EPA personnel evaluated these criteria packages and created a pool of allocator candidates for which PRPs will vote to choose an allocator for each site. As the representative of the orphan parties, EPA will also vote for allocators at each site. Once an allocator has been selected, he or she will work with the parties at each sité to determine their share of liability for the contamination, and make recommendation regarding each party's share of the cleanup costs. The entire process at each site is expected to be completed about nine months after the beginning of allocation negotiations.

EPA is committed learning from this pilot project and realizing the potential the proposed allocation process has for increasing fairness and reducing transaction costs in the Superfund program. The allocation pilot project will enhance fairness because allocation will be based on each party's "fair share," and each PRP has a vote in determining who will conduct the allocation. Government and PRPs will benefit from the streamlined out-of-court allocation because the allocation process is quicker and costs less than reaching traditional enforcement

settlements. The allocation pilot project will continue at the seven pilot sites into FY96. EPA will use this pilot project to gain experience with the allocation process and to understand better the costs and timelines involved in the allocation procedures.

### 4.3.3 Guidance on Prospective Purchaser Agreements

During FY95, EPA launched the Brownfields Economic Redevelopment Initiative, designed to empower stakeholders in economic redevelopment to prevent, assess, safely clean up, and sustainably reuse Brownfields. Brownfields are abandoned, idled, or under-used industrial or commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. One important element in ensuring the success of the Brownfields initiative is to assure prospective buyers of brownfield properties that they will be free from Superfund liability for existing contamination.

When prospective purchasers of Superfund sites know of contamination prior to purchase of property, they may be liable for site cleanup because their knowledge of the contamination prevents their use of CERCLA's "innocent landowner" defense. Prospective purchasers may be willing to enter into agreements to conduct or finance some cleanup work in return for a covenant from EPA not to sue. EPA, local communities, and the regulated community can benefit in several ways from successful prospective purchaser agreements. EPA can gain additional funding to finance cleanup at the site. communities and economies can benefit from redevelopment of the site that creates jobs and returns the property to productive use. The prospective purchaser benefits by gaining access to a prime business location without fear of possible Superfund liability.

EPA published Guidance on Agreements with Prospective Purchasers of Contaminated Property on July 3, 1995, superseding the 1989 prospective purchaser agreement guidance. The 1995 guidance includes a model prospective purchaser agreement. In an effort to increase the use of prospective purchaser agreements, EPA has expanded the criteria to be considered in entering into these agreements. EPA will now consider entering into a prospective

purchaser agreement if it results in either 1) a substantial direct benefit to the Agency in terms of cleanup or funds for cleanup, or 2) a substantial benefit to the community, such as creating or retaining jobs, making productive use of abandoned property, or revitalizing blighted areas.

Prospective purchaser agreements have become an important element of EPA's commitment to enforcement fairness in the Superfund program. The revised guidance on prospective purchaser agreements now affords EPA greater enforcement flexibility and provides prospective buyers a large measures of fairness and confidence that they will not be held liable under CERCLA for contamination that occurred under previous landowners. In FY95, EPA entered into eight prospective purchaser agreements (PPA) with private parties. Regions 2, 8, and 9 each achieved one agreemnt, while Regions 3 and 4 achieved three and two agreements, respectively. Five of the agreements lead to the direct redevelopment and reuse of contaminated properties, including new building construction and decontamination and resue of existing structures.

CERCLA prospective purchaser agreements. Settlement terms included undertakings to conduct cleanup and oversight and maintenance operations, implement an on-site multimedia environmental program, conduct on-site inspections of underground storage tanks, and pay EPA Superfund response costs of over \$1.6 million. Under these agreements, companies such as Home Depot, Rogers Iron and Metal Corporation, and GMT Microelectronics are now free to pursue redevelopment of Superfund sites in Pennsylvania, Missouri, California, and Colorado. Communities, industry, and EPA all have benefitted from the agreements, and EPA will continue to negotiate these agreements that put industrial properties back to work.

## 4.3.4 Guidance on Properties Containing Contaminated Aquifers

During FY95, EPA issued its Final Policy Toward Owners of Property Containing Contaminated Aquifers. This policy removes the threat of Superfund liability for owners of property contaminated with hazardous substances as a result of migration in an aquifer from a source or sources

outside the property. In order to be protected by the policy, the property owner must not have caused, contributed to, or exacerbated the migration and must not have contributed to the source of contamination as a generator or transporter of hazardous substances. In addition, the property owner must ensure EPA that the person who caused the contamination of the aquifer was not an agent or employee of the owner or involved in a contractual relationship with the owner of the property. Property owners who meet these conditions will no longer be subject to Superfund enforcement actions on the basis of migratory contamination.

Contaminated groundwater is an issue of great concern in Superfund. Approximately 85 percent of sites on the National Priorities List have some degree of groundwater contamination. Contaminated groundwater plumes are often long and/or large, and determining the source of contamination can be difficult. Previously, owners of properties with contaminated groundwater faced uncertainty with respect to Superfund liability as an "owner." The Aquifer Policy removes this uncertainty and demonstrates EPA's willingness to exercise its enforcement discretion in an effort to increase fairness in the Superfund enforcement program.

## 4.3.5 Guidance on Supplemental Environmental Projects

In May 1995, EPA issued its Supplemental Environmental Projects (SEPs) Policy, clarifying and superseding its 1991 policy on SEPs. The revised policy establishes guidelines for proposing SEPs that secure significant environmental or public health protection and improvements. SEPs can enhance Superfund settlement opportunities by giving PRPs an incentive to go beyond the minimum settlement response requirements and undertake value-added projects as part of an overall settlement agreement.

The policy defines SEPs as "environmentally beneficial projects which a defendant/respondent agrees to undertake in settlement of an enforcement action, but which the defendant/respondent is not otherwise legally required to perform." The policy also details the legal guidelines that must be met for SEPs. The project must demonstrate a relationship between the SEP and the violation (this is known as

the "nexus" relationship) and that the project must fall within one of seven categories. These categories include:

- Public health analysis or improvement
- Pollution prevention
- Pollution reduction
- Environmental restoration and protection
- · Assessments and audits
- Environmental compliance promotion
- Assistance in emergency planning and preparedness

SEPs are particularly appropriate for brownfield site settlements. In September 1995, OSRE published a fact sheet entitled *Using Supplemental* Environmental **Projects** to Facilitate Redevelopment of Brownfields. As noted above, Brownfields are abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. The fact sheet summarizes EPA's May 1995 SEP Policy and provides examples of SEPs that can facilitate the redevelopment of Brownfields. These SEPs include investigating contamination, pollutants, or discharges at the site, ecological surveys, natural resource damage assessments, and risk assessments.

To date, SEPs have not often been used to facilitate Superfund settlements, but FY95 saw the beginning of an increase in their use. During FY95, EPA entered into SEPS with a total value of approximately \$115,000. These SEPs were used to supplement CERCLA Section 103 settlements (dealing with notification requirements for spills and discharges).

### 4.3.6 Environmental Justice and Superfund Enforcement

EPA continued to demonstrate its commitment to environmental justice in Superfund enforcement during FY95. Environmental justice ensures the fair treatment of people of all races, cultures, incomes, and education levels with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Focusing on environmental justice in Superfund enforcement is particularly important, as many Superfund sites are

located in minority, low-income, or other at-risk areas.

EPA's Office of Site Remediation Enforcement's environmental justice efforts have concentrated on supporting the Regions' and EPA's Office of Solid Waste and Emergency Response (OSWER) Superfund programs. This support has included identifying data collection and quality needs, enhancing community involvement, evaluating innovative ways to assist Regional offices in resolving enforcement settlement negotiations, and reviewing and evaluating current Superfund enforcement policies and guidance. OSRE has dedicated one full-time employee to manage environmental justice activities. In addition, OSRE has established an office-wide Environmental Justice Coordinating Team.

During FY95, environmental justice became the focus of EPA's Administrative Reform efforts, with emphasis on increasing fairness in the enforcement process through enhancing community involvement in Superfund enforcement. Environmental justice pilot projects are underway to encourage community involvement at Superfund sites where PRPs are conducting studies or site cleanup under EPA oversight. Following implementation of the pilot project, EPA will evaluate the impacts that enhanced community involvement had on both the settlement negotiation process and the cleanups and studies themselves.

EPA used several criteria to identify PRP-lead sites where different approaches for enhancing community involvement could be reasonably tested and evaluated. In general, the Agency selected sites where: 1) EPA had already selected, or would select in the near future, the response action; 2) EPA expected that the PRPs would perform the response action; and 3) the community had already demonstrated an interest in the cleanup. EPA has initiated 12 community involvement pilot projects in the Regions. Approximately half the projects involve providing opportunities for communities to discuss and review drafts of Statements of Work for sites where PRPs are designing and conducting cleanups. Many of the other pilot projects involve giving local citizens an opportunity to discuss and review draft Statements of Work for feasibility

studies, which evaluate measures for reducing threats posed by the Superfund sites to human health and the environment. Efforts to ensure the public's input have gone even further at sites such as the Pine Street Barge Canal site, where local citizens are working jointly with PRPs to prepare the draft Statement of Work for a supplemental feasibility study.

Two other pilot projects involve increasing public involvement in removal actions being implemented by PRPs. In addition, at the Springfield Township site in Michigan, EPA Region 5 personnel are working with the PRPs and local citizens to develop a consensus on an appropriate amendment to the cleanup option originally selected by EPA and documented in the Record of Decision. EPA is providing the public at this site with an opportunity to review and comment on various technical documents, including a treatability study being prepared by the PRPs for alternative cleanup technologies.

Other FY95 environmental justice initiatives in the Superfund enforcement program included efforts to increase awareness of environmental justice, expand its application in Superfund enforcement, coordinate environmental justice training, and develop community-based partnerships to enhance grass-roots environmental justice efforts. Specific FY95 initiatives include the following:

- OSRE personnel presented a workshop entitled "Environmental Justice Issues in Public Policy Disputes" as part of Bowie State University's Alternative Dispute Resolution conference. The workshop focused on the creation and use of effective methods of public participation in alternative dispute resolution, and included an overview of how ADR principles can be used to facilitate environmental justice efforts.
- Region 4's Waste Management Division in conjunction with OSWER awarded a \$252,000 grant to Clark/Atlanta University Environmental Justice Resource Center to develop an environmental justice partnership project.
- A "Community Economic Partnership" Seminar was held in December 1994 in New Orleans, Louisiana by the Region 6 Hazardous Waste

Division in response to requests from small, minority-owned businesses in the area of the Agri-Street Superfund site to provide opportunities to community businesses to bid on subcontracts for cleanup work and related support at the site. A similar conference was held in Albuquerque, New Mexico in August 1995.

OSRE participated in EPA's National Enforcement Training Institute Environmental Justice Training Pilot. In coordination with the Office of Solid Waste and Emergency Response and the Regions, this training is being developed to assist Headquarters and the Regions in conducting environmental justice training. The training focuses on providing employees with an awareness of environmental justice, identifying issues surrounding the incorporation of environmental justice into EPA's practices, and identifying barriers to community involvement in effort to provide community-based environmental protection. Environmental justice modules were also added to computer-based training on Superfund enforcement, negotiations, and settlement.

### 4.3.7 Early PRP Searches

One of the key components of the Superfund Administrative Reform efforts is reducing the transaction costs associated with Superfund settlements for both PRPs and the government. Throughout FY95, EPA has been conducting an Administrative Reforms pilot project designed to test procedures to streamline and improve PRP search procedures in order to speed the process and reduce transaction costs. The central focus of the pilot project has been identifying PRPs early and releasing PRP information to the public early. The PRP search pilot project reorients search procedures to facilitate the expedited settlements and allocations pilot projects.

In March 1995, EPA convened a national conference on PRP search procedures to share information and brainstorm innovative ways to expedite the PRP search process. Based on the results of the conference, EPA has begun expanding and updating existing PRP search guidance. Pilot

PRP search procedures got underway at 12 Superfund sites during the spring of 1995. Each pilot PRP search is designed to identify and notify de minimis parties of their potential liability within 12 months of the start of the search. All others parties will be notified of their potential liability within 18 months of the start of the search. Several PRP search streamlining techniques are being tested, including newspaper advertising to collect information from the public, conducting early interviews to obtain information and minimize the need for multiple rounds of information requests, and giving PRPs the opportunity to provide information regarding other potential parties. EPA anticipates that these more open and expedited PRP search procedures will speed enforcement settlements by providing more complete and reliable data concerning PRPs faster.

## 4.3.8 Superfund Enforcement Expedited Settlements

During FY95, EPA's Administrative Reform efforts focused on procedures for expediting settlements with *de minimis* parties and parties with limited ability to pay. In May 1995, EPA announced the initiation of pilot projects to test and evaluate these expedited settlement procedures.

EPA has begun implementing expedited settlement procedures at sites where the PRP search is substantially complete. At these sites, EPA will settle earlier (generally prior to the Record of Decision) with both small volume (de minimis) contributors and PRPs with a limited ability to pay response costs. EPA is developing response cost estimates and has issued premium guidance to facilitate early de minimis settlements as well as uniform criteria and procedures for determining a PRP's ability to pay. Where appropriate, EPA will also develop model information request clauses, consent decree language, or other tools to expedite such settlements.

Several tools were developed during FY95 to assist with the settlement of *de minimis* and ability-to-pay parties under this reform. These tools include:

 "Overview of Ability-to-Pay Guidance and Models," May 1995 – This fact sheet identifies and describes documents that are relevant to Superfund ability-to-pay analyses. The fact sheet summarizes eight general policy documents and nine documents that assist in determining a party's ability to pay status and the amounts they should pay.

- "Standardizing the De Minimis Premium," July 1995 – This guidance document establishes presumptive premium figures, describes the most likely basis for deviating from such figures, and recommends a method for effectively communicating the premium determination process to the de minimis settlers and other interested parties at a site.
- Revised Model CERCLA Section 122(g)(4) De Minimis Contributor Consent Decree, September 1995 The model, which supersedes the October 19, 1987 interim model, provides guidance for EPA and DOJ staff when negotiating de minimis contributor judicial consent decrees. The model is expected to expedite negotiations of de minimis settlements, increase fairness and consistency of settlements, and streamline review of de minimis consent decrees.
- Revised Model CERCLA Section 122(g)(4) De Minimis Contributor Administrative Order on Consent, September 1995 The model, which supersedes the October 19, 1987 interim model, provides guidance for EPA and DOJ staff when negotiating de minimis contributor administrative orders on consent. The model is expected to expedite negotiation of de minimis settlements, increase fairness and consistency of settlements, and streamline review of de minimis consent orders.

A workshop was also conducted for financial analysts in June 1995 where the concepts of new guidance documents on ability-to-pay settlements were developed. Additional information and contractor support resources were also made available to increase the Regions' financial analysis capacity.

Four expedited settlements were successfully completed during FY95, resulting in the release of 236 *de minimis* parties from the Superfund process

prior to signature of the Record of Decision. At two of the four sites, EPA settled early with four parties based upon their inability or limited ability to pay their proposed share of the cleanup costs. In addition, the PRPs associated with the pilot sites were provided the opportunity to nominate other parties to the process. This was done in a variety of ways, i.e., through the PRP Steering Committees, highlighting the nominations process in the 104(e) and general notice letters, and at meetings with PRPs to inform them about nominations opportunity. Guidelines for nominating additional parties to the process were developed and used to implement this portion of the reform.

## Exhibit 4.2-4 Highlights of Successful Enforcement Accomplishments

Ewan Property .
New Jersey (Region 2)

Settlement: UAO (UAOO7) for RD/RA at OU2 - issued on 5/19/95; PRPs notified EPA on 6/8/95 of their intent to comply

Estimated Value:

\$30 million

Eighteen PRPs are performing remedial work at the Ewan Property site located in Burlington County, New Jersey, pursuant to a UAO issued on May 18, 1995. The PRPs' notice of intent to comply with the order was dated June 8, 1995. The UAO directs the PRPs to perform the remedial design and action, the first phase of which consisted of removing buried drums and associated soils. This phase was completed in July 1995. The second phase will consist of pumping and on-site treatment of contaminated ground water, using a combination of chemical, physical and biological treatment, followed by on-site discharge of treated water to infiltration basins. The estimated value of this settlement is \$30 million.

The Ewan Property consists of 43 heavily wooded acres located within the Central Pine Barrens portion of the New Jersey Pinelands. Ground water and soil are contaminated with volatile organic compounds (VOCs), including acetone and benzene, semi-volatiles, and the metals lead, chromium, and aluminum. The New Jersey Pinelands is a major ground water recharge zone, and the aquifer underneath has been designated a sole-source aquifer for the area. Approximately 330 people live in the area and are served by individual domestic water wells. The PRPs performed earlier remedial actions at the site, including the restoration of a small on-site wetland area.

Goodyear Tire and Rubber Company Niagara Falls Plant New York (Region 2)

Settlement: Region 2 issued an administrative consent order on 9/28/95, settling a case in which EPA cited Goodyear with violations of CERCLA Section 103 and EPCRA Section 304. The settlement includes a supplemental environmental project (SEP).

Estimated Value:

\$75,000 civil penalty \$95,000 SEP

The order asserted that Goodyear failed on three occasions to immediately notify the National Response Center and state and local emergency response agencies of releases of vinyl chloride, a hazardous substance, from its facility in Niagara Falls, New Goodyear subsequently documented changes in its internal release notification procedures and provided training in those procedures to its staff to prevent late notifications from The settlement also included a occurring in the future. supplemental environmental project (SEP). The SEP will provide equipment and materials including a response vehicle, communications equipment, the CAMEO computer equipment program and a computer to run it, confined space rescue material, self-contained air supply equipment, and expendable materials such as sorbent materials to assist the fire departments of the cities of Niagara Falls, North Tonawanda, and Lockport, New York.

Delaware Sand and Gravel Site Delaware (Region 3)

Three settlements:

Settlement 1: CD for part of EPAs past costs incurred after April 1988 - entered in the District Court for the District of Delaware on 9/22/95

Estimated Value:

\$375,000

Settlement 2: CD for past costs entered in the District Court for the District of Delaware on 9/22/95

Estimated Value:

\$300,000

Settlement 3: CD for RA at OU3, RD/RA for OUs4&5 and site-wide O&M. PRPs will also reimburse EPA for RD/RA at OU1, and RD at OU2. CD was lodged in the District Court for the District of Delaware on 4/18/95 and entered on 6/16/95.

Estimated Value:

\$33.5 million

Halby Chemical Co. Delaware (Region 3)

Settlement: UAO (UAO01) for removal activities issued on 7/20/95; PRPs notified EPA on 7/28/95 of their intent to comply

Estimated Value:

\$13 million

EPA reached three separate agreements with PRPs to recover. past costs and conduct cleanup work at the Delaware Sand and Gravel Site in New Castle County, Delaware. These settlements recover approximately 97% of the costs that EPA incurred cleaning up the site. Consent decrees detailing two of the settlements were entered in the U.S. District Court for the District of Delaware on September 22, 1995. In one, Avon Products, Inc. agreed to reimburse EPA for \$375,000 in response costs incurred at the site. In the other, MRC Holdings, Inc. agreed to reimburse the Agency for \$300,000 in response costs. A third decree was entered on June 16, 1995. Under the terms of this settlement, 33 cooperating companies will spend approximately \$33.5 million performing remedial action at three disposal areas that have not yet been cleaned up. They will install a multi-layer cap over the Inert Area (Operable Unit 3), an 11-acre landfill containing 25 to 30 feet of mixed chemical and industrial wastes, and perform remedial design and remedial action (RD/RA) for the Drum Disposal/Ridge Areas (Operable Units 4 and 5). This work will include installation of a slurry wall, excavation and offsite disposal of drummed waste, treatment of contaminated soils using bio-venting technology, placement of a RCRA-type cap over the treated soils, and site-wide operation and maintenance. The 33 settling PRPs will also reimburse EPA \$4.3 million for performing RD/RA at the Grantham South Area (Operable Unit 1) and RD for Operable Unit 2, an abandoned plan to incinerate wastes at the Drum Disposal/Ridge Areas.

On July 20, 1995, EPA issued a UAO (UAOO1) requiring Witco Corporation to perform removal activities at the 14-acre Halby Chemical site located in Wilmington, Delaware. Witco Corporation notified EPA of its intent to comply with the order on July 28, 1995. Removal activities worth an estimated \$13 million will address highly contaminated and flammable soils in the vicinity of a public water line. A treatability study exploring the possibility of in-place chemical neutralization of carbon disulfide in soils is under way.

EPA expects to select a remedy for ground water and sediment contamination in the lagoon and marsh area in December 1996. In 1991, EPA issued a record of decision calling for the excavation, stabilization and capping of the upper six inches of surface soil in the former process plant area. In 1992, Witco agreed to design and construct the soil stabilization remedy, but implementation has been delayed due to a land use conflict between Witco and Brandywine Chemical Company, the current property owner. Work is expected to resume in the spring of 1996.

Novak Sanitary Landfill Pennsylvania (Region 3)

Settlement 1: UAO (UAOO1) for RD/RA at OU1 issued on 6/30/95; PRPs notified EPA on 8/1/95 of their intent to comply

Estimated Value:

\$16,105,149

Settlement 2: *De minimis* AOC for past RI/FS costs and future costs signed on 9/29/95

**Estimated Value:** 

\$300,920

Revere Chemical Co. Pennsylvania (Region 3)

Settlement: UAO (UAOO2) for RD/RA issued on 12/14/94; PRPs notified EPA on 1/20/95 of their intent to comply

Estimated Value:

\$15,581,432

William Dick Lagoons Pennsylvania (Region 3)

Settlement: CD (CD01) for RD/RA, oversight, and other cost recovery for OU1, RD for OU2, and RD/RA for OU3. PRPs will also pay \$260,000 in penalties for violating a 1992 EPA order. CD was lodged in the U.S. District Court for the Eastern District of Pennsylvania on 7/10/95 and entered on 10/10/95.

Estimated Value:

\$14.57 million

On June 30, 1995, EPA issued a UAO to 20 PRPs requiring them to perform all remedial design and remedial action work necessary to clean up the Novak Sanitary Landfill site in Lehigh County, Pennsylvania. By early August, EPA had received notices of intent to comply with the order from all 20 PRPs. The work, which includes installation of a landfill cap, a gas and leachate collection system, possible treatment of the leachate, further investigation of another potential source area, and monitoring of residences and wells in the vicinity of the site, will cost an estimated \$16,105,149. The Agency may direct the PRPs to install an active gas collection system if the proposed passive collection system proves ineffective. In addition, EPA reached an agreement with seven de minimis parties on September 29, 1995. The agreement, an AOC, recovers past costs, RI/FS costs, and remedial design and remedial action costs in return for a release from further liability. settlement recovers \$300,920.

EPA issued a UAO (UAOO2) on December 14, 1994, requiring 12 PRPs to perform an estimated \$11,152,824 worth of cleanup work at the Revere Chemical Co. site in Bucks County, Pennsylvania. In January 1995, the PRPs notified EPA of their intent to comply with the order to perform remedial design and action at the site, including removal of solid waste and debris, excavation of a lagoon for buried drums, design of an *in situ* vacuum extraction system to treat organically contaminated soil, construction of a slurry wall around former basins to contain organics unsuitable for *in situ* treatment, and installation of a semi-impermeable cap to prevent release of metals from contaminated soils.

EPA reached an agreement with Chemical Leaman Tank Lines, Inc. (CLTL) regarding the William Dick Lagoons site in Chester County, Pennsylvania. A consent decree (CD01) setting forth the terms of the settlement was entered in the U.S. District Court for the Eastern District of Pennsylvania on October 10, 1995. The settlement requires CLTL to reimburse EPA \$1.57 million for installation of a public water supply line to protect nearby homes from potential ground water contamination and \$420,000 for additional response costs associated with the site. CLTL will also install a pump and treat system as an interim ground water cleanup measure, and use a combination of low temperature thermal absorption, soil vapor extraction/bioremediation, and hot air vapor extraction to clean up contaminated soil. In addition, CLTL will pay \$260,000 in penalties for violating a 1992 EPA order requiring cleanup of contaminated ground water. The total estimated value of the settlement is \$14.57 million.

The groundwater was contaminated with trichloroethylene (TCE), chloroform, and other volatile organic compounds (VOCs), and soil was contaminated with a variety of VOCs and semi-VOCs, polycyclic aromatic hydrocarbons (PAHs), and pesticides.

Woodlawn County Landfill Maryland (Region 3)

Settlement: UAO (UAOO1) for RD/RA issued on 11/25/94; PRPs notified EPA on 12/28/94 of their intent to comply

Estimated Value:

\$24 million

Bypass 601 Groundwater Contamination Site

North Carolina (Region 4)

Settlement: Consent Decree for RD/RA entered on 1/25/95 in the Middle District Court of North Carolina. CD provides for cleanup costs and collection of 100% of past costs, utilizing preauthorization mixed-funding and "de micromis" settlements.

Estimated Value:

\$40 million

Maxey Flats Landfill Kentucky (Region 4)

Settlement 1: CD (CD03) for RD/RA at OU1, and past costs - lodged with the U.S. District Court for the Eastern District of Kentucky Frankfort Division on 7/5/95 and entered on 4/18/96.

Estimated Value:

\$60 million

Settlement 2: *De minimis* CD (CD02) for initial remedial phase of cleanup, and future costs - lodged with the U.S. District Court for the Eastern District of Kentucky, Frankfort Division on 7/5/95 and entered on 4/18/96.

Estimated Value:

\$9.27 million

On November 25, 1994, EPA issued a UAO (UAOO1) requiring Bridgestone/Firestone, Inc. and the Board of County Commissioners for Cecil County to conduct the remedial design and remedial action at the Woodlawn County Landfill in Cecil County, Maryland. Both parties notified EPA of their intent to comply with the order in December 1994. The work, valued at \$24 million, includes design, construction, and operation and maintenance of a cap over the landfill, a ground water extraction system, and an on-site air stripping system to treat contaminated ground water.

The Bypass 601 Groundwater Contamination Site includes an inactive battery cracking facility and 10 source areas around the site, where the battery casings were buried after being cracked. Approximately 4,000 PRPs were identified, including approximately 2,400 "de micromis" parties. Of the "non-de micromis" parties, only approximately 500 PRPs were located, creating an orphan share of approximately 1,100 PRPs. The \$40 million remedy selected for the site includes soil solidification and stabilization and a pump-and-treat system.

The Consent Decree at the site provides for Preauthorization Mixed Funding of approximately \$10.1 million, because of the large orphan share at the site. Region 4 will recover 100% of its past costs, and has negotiated a "de micromis" settlement which provides for a covenant by the settling defendants not to sue "de micromis" parties at the site. This approach protects small parties from contribution suits and unnecessary transaction costs.

EPA reached two separate agreements with approximately 400 private and government parties to clean up contamination at the Maxey Flats Landfill site in Fleming County, Kentucky. Both consent decrees (CD02 and CD03) were lodged with the U.S. District Court for the Eastern District of Kentucky, Frankfort Division on July 5, 1995. CD03 requires 43 settling private parties to spend approximately \$35 million to perform the initial phase of the remedial action, which consists of designing and constructing a cap to replace the one currently over the landfill and performing 10 years of operation and maintenance. The settlors will also reimburse EPA \$5 million for past cleanup costs. CD02 directs 366 *de minimis* PRPs, including several universities, Fortune 500 companies, and 12 federal agencies, to pay approximately \$9.27 million into a special trust fund for the initial phase of the cleanup and possible cost overruns.

Olin Corporation (McIntosh Plant) Alabama (Region 4)

Settlement: CD for RD/RA and O&M lodged with the U.S. District Court for the Southern District of Alabama, Southern Division on 7/5/95.

Estimated Value:

\$10 million

EPA and the Department of Justice reached an agreement with Olin Corporation to perform approximately \$10 million worth of ground water cleanup work at the 60-acre McIntosh plant in McIntosh, Alabama. A consent decree setting forth the terms of the settlement was lodged in the U.S. District Court for the Southern District of Alabama, Southern Division on July 5, 1995. Olin will pump and treat ground water on the plant property and extend and/or upgrade existing caps over old disposal areas. Olin is currently conducting studies to determine the most effective method for treating contaminated ground water. Once the construction phase of the remedy is complete, operation and maintenance at the site could last up to 30 years.

A O Smith Electric Motor Company Indiana (Region 5).

Settlement: UAO (UAOO1) for two removal actions, issued 02/26/95; notice of intent to comply given 12/15/95.

Estimated Value:

\$14 million

Arrowhead Refinery Company Minnesota (Region 5)

Settlement: CD (CD01) for RD/RA at Operable Unit 1, lodged with U.S. District Court for the District of Minnesota, Fifth Division 03/09/95; entered 05/24/95

Estimated Value:

\$16,135,000

On February 26, 1995 EPA issued a UAO (UAOO1) for two separate removals at the A O Smith Electric Motor Company site located in Union City, Indiana. On 12/15/95, AO Smith Electric notified EPA of its intent to comply with the order. The PRP will perform cleanup work worth an estimated \$14 million. One of the removal actions, estimated to cost \$4 million and the other is valued at an estimated \$10 million.

EPA entered into a mixed-funding agreement with 72 PRPs to perform cleanup work at the Arrowhead Refining Company site in Hermantown, Minnesota. The terms of the agreement are set forth in a consent decree (CD01) that was entered in the U.S. District Court for the District of Minnesota, Fifth Division on May 24, 1995. The PRPs agreed to remove approximately 4,600 cubic yards of contaminated sludge and filter cake from a two-acre lagoon and recycle the sludge as fuel oil. EPA agreed to commit Superfund money to stabilize and dispose of the residual solids from this process in an off-site facility and to excavate approximately 40,000 cubic yards of contaminated soil and dispose of them off site. Superfund is paying for part of the cleanup because of the site's large "orphan share" contamination for which no viable PRP can be identified. In a related settlement, 137 de minimis and "de micromis" PRPs agreed to reimburse the 72 major PRPs for part of the cleanup costs in exchange for a release from further liability. The total estimated value of the cleanup work to be performed by the PRPs is \$16,135,000. The PRP has completed excavation of the lagoon sludge; EPA expects to complete its excavation, stabilization, and disposal activities in FY 1996.

Kerr-McGee Residential Areas Illinois (Region 5)

Settlement: UAO (UAO01) for removal actions, issued 11/18/94; notice of intent to comply given 11/30/94.

Estimated Value:

\$70 million

Kerr-McGee Chemical Corporation is conducting cleanup activities at the Kerr-McGee Residential Areas site in West Chicago, Illinois pursuant to a UAO (UAOO1) issued by EPA on November 18, 1994. The order requires the PRP to excavate radioactive soil at area residences, backfill and restore the properties, and transport the excavated soil to a licensed off-site disposal facility. The PRP notified the Agency of its intent to comply with the order on November 30, 1994. EPA has so far identified 65 properties as contaminated; of these, the PRP has completely cleaned up 42 and is at work on others. EPA field crews are intensively surveying approximately 1,200 individual properties in the site study area for elevated levels of radioactivity, and is continuing to identify contaminated properties. The Agency may also identify other contaminated areas and designate them part of the site. When the survey work is completed, EPA will seek to recover its costs from the PRP. The cleanup work alone has an estimated value of \$70 million.

Ninth Avenue Dump Indiana (Region 5)

Settlement: UAO (UAOO3) for RD/RA at Operable Unit 2, issued 12/27/94; notice of intent to comply given 01/31/95

Estimated Value:

\$20 million

EPA issued a UAO (UAOO3) on December 27, 1994, requiring 95 PRPs to perform cleanup work at the Ninth Avenue Dump site in Gary, Indiana. By January 31, 1995, 20 PRPs had notified the Agency of their intent to comply with the order. The cleanup work consists of constructing an inner slurry wall around an 11-acre area of the site, placing an impermeable cap over the area, and installing a soil vapor extraction system. The work has an estimated value of \$20 million. Earlier remedial work at the site, which also cost approximately \$20 million, included construction of an outer slurry wall, pumping and onsite treatment of oil-contaminated ground water, and installation and operation of a surface water treatment system. The slurry walls prevent migration of contaminated ground water off site. Construction of the inner wall will also preserve an on-site pond. The Agency is also seeking an agreement with the PRPs for recovery of approximately \$2.5 million in outstanding past response costs and reimbursement of future oversight costs.

Missouri Electric Works Missouri (Region 7)

Settlement: CD (CD02) for cost recovery and RA at Operable Unit 1, lodged with U.S. District Court for the Eastern District of Missouri 03/09/95; entered 05/10/95

Estimated Value:

\$13 million

EPA and DOJ reached a settlement with a major PRP to recover past response costs and conduct cleanup work at the Missouri Electric Works site in Cape Girardeau, Missouri. The terms of the settlement, which is worth approximately \$15 million, are set forth in a consent decree (CDO2) that was entered in the U.S. District Court for the Eastern District of Missouri on May 10, 1995. The cleanup work consists of excavation and off-site disposal of contaminated soil.

Broderick Wood Products Colorado (Region 8)

Settlement: CD (CD02) for RD/RA at Operable Unit 2, lodged with U.S. District Court for the District of Colorado 05/22/95; UAO (UAOO1) for same issued 02/22/95

Estimated Value:

\$24,330,000

Lowry Landfill Colorado (Region 8)

Settlement: UAO (UAOO2) for RD/RA at Operable Unit 1, issued 11/18/94; notice of intent to comply give 01/17/95; CD (CDO9) for cost recovery and cash-out lodged with U.S. District Court for the District of Colorado 07/10/95

Estimated Value:

\$101,283,104

Apache Powder Company Arizona (Region 9)

Settlement: UAO (UAOO2) for RD/RA at Operable Unit 1, issued 12/21/94; notice of intent to reply given 01/06/95

Estimated Value:

\$20 million

On May 22, 1995, EPA and DOJ lodged a consent decree (CD02) with the U.S. District Court for the District of Colorado, requiring Broderick Investment Company (BIC) to perform an estimated \$13 million worth of cleanup work at the Broderick Wood Products site in south Adams County. Under the terms of the settlement, the PRP will operate a soil treatment unit, remove oil that is currently floating on top of contaminated ground water, de-water the aquifer system, and treat it with a process called bioventing, which stimulates the growth of natural organisms that help break down contaminants. The settlement also requires the PRP to reimburse EPA \$10.7 million and the State of Colorado \$630,000 in past response costs. In order to take advantage of the construction season, cleanup work began in the summer of 1995 under the authority of a UAO (UAOO1) issued on February 22, 1995. The UAO will expire when the district court approves and enters the CD. The Agency and DOJ are currently seeking to recover an additional \$10.5 million in past response costs from another PRP.

EPA issued a UAO (UAOO2) to 34 PRPs, requiring them to undertake approximately \$94 million in cleanup work at the Lowry Landfill site in Arapahoe County, 15 miles southeast of downtown Denver. The Agency ordered the PRPs to implement a sitewide remedy affecting contaminated soil, sediment, and ground and surface water, landfill gas, waste pit liquids, and buried drums. Three PRPs - the City and County of Denver (Denver), Waste Management of Colorado, Inc. (WMC), and Chemical Waste Management, Inc. (CWM) - have notified EPA that they intend to comply with the order, and have reached agreements with 22 other PRPs to perform the work on their behalf. Another PRP agreed to pay \$7,283,104 to resolve its liability for cleanup work and to reimburse the Agency for past response costs. A consent decree setting forth the agreement was lodged with the U.S. District Court for the District of Colorado on July 10, 1995.

EPA issued a UAO (UAO02) on December 21, 1994, requiring Apache Nitrogen Products, Inc. (ANP) to perform cleanup design and construction work at the Apache Powder site in St. David, Arizona, approximately 50 miles southeast of Tucson. The PRP notified EPA of its intent to comply with the order on January 6, 1995. The Agency's remedy for nitrate contamination at the site includes pumping and treating perched ground water in a brine concentrator, pumping and treating shallow aquifer ground water in constructed wetlands, excavating and removing leadand dinitrotoluene-contaminated soils for off-site treatment and disposal, and conducting additional ground water investigation and monitoring during the design phase. Heavy-metalcontaminated soil and sediment in several inactive disposal ponds will be covered with a low-permeability clay cap. In compliance with the UAO, ANP has connected eight area households whose well water was contaminated to deep aquifer replacement wells. ANP supplied these households with bottled water since 1989 at EPA's direction. In response to comments received from members of the community, EPA also directed ANP to study various alternatives for recharge of the treated ground water, including possible use for agricultural irrigation. The design and construction work is expected to cost approximately \$10 million to \$15 million.

King Neptune Site California (Region 9)

Settlement: *De Minimis* Administrative Cost Recovery Settlement completed on 11/22/94 for reimbursement of EPA's incurred costs at the site.

**Estimated Value:** 

\$580,264

Operating Industries, Inc. Landfill California (Region 9)

Settlement: CD (CD06) for RD/RA and cost recovery at Operable Units 1-4, lodged with U.S. District Court for the Central District of California 12/29/94; entered 04/03/95

Estimated Value:

\$36 million

A hospital group made up of 240 *de minimis* PRPs will reimburse EPA for costs incurred in removal actions at the site. The site operated as a former lead smelter, and the major generators were area hospitals disposing of lead "pigs" from radioactive isotopes. This settlement utilized transaction cost reduction techniques such as conducting non-confrontational, business negotiations, providing microfiche documentation with the settlement offer, and accepting payment as proof of settlement. Most of the hospitals completed their settlement negotiations within 30-60 days.

EPA negotiated settlement of a contribution action involving two groups of parties at the Operating Industries, Inc. Landfill site in Montebello, California. A consent decree (CD04) setting forth the terms of the agreement was entered in the U.S. District Court for the Central District of California on April 3, 1995. Under the terms of the decree, 14 municipalities, the County of Los Angeles, the California Department of Transportation, six garbage disposal districts, and numerous waste haulers, will contribute approximately \$63 million toward cleaning up the landfill, bringing to over \$268 million the total amount committed by PRPs to site cleanup. The lawsuit dated from 1989, when a group of PRPs who had settled with EPA brought a contribution action against 29 municipal entities. Other parties were brought in through third-party claims. EPA facilitated the settlement by agreeing to provide the defendants contribution protection as part of an overall settlement agreement. Some de minimis defendants settled with EPA under a previous administrative agreement.

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# Chapter 5 Federal Facility Cleanups

Departments and agencies of the federal government manage a variety of industrial activities at 27,000 installations. Due to the nature of such activities, whether they are federally or privately managed, federal installations may be contaminated with hazardous substances and therefore subject to CERCLA requirements.

Although federal facilities comprise only a small percentage of the community regulated under CERCLA, they are usually larger and more complex than their private industrial counterparts. Because of their size and complexity, compliance with environmental statutes may present unique management issues for federal facilities.

#### 5.1 The Federal Facilities Program

CERCLA Section 120(a) requires that federal facilities comply with CERCLA requirements to the same extent as private facilities. Executive Order 12580 delegates the President's authority under CERCLA to federal departments and agencies, making them responsible for cleanup activities at their facilities. At federal facilities that are National Priorities List (NPL) sites, which are sites having the highest priority for remediation under Superfund, CERCLA mandates that cleanups be conducted under interagency agreements (IAGs) between EPA and relevant federal agencies. States are often a party to these agreements as well. To ensure federal facility compliance with CERCLA requirements, EPA provides technical advice and assistance and may take enforcement action when appropriate.

In addition to CERCLA, there is a range of authority and enforcement tools under state statutes that apply to non-NPL federal facility sites. Indian tribes also may be involved in federal agency compliance with environmental regulations when acting as either lead or support agencies for Superfund response actions.

# 5.1.1 Federal Facility Responsibilities Under CERCLA

Federal departments and agencies are responsible for identifying and addressing hazardous waste sites at the facilities that they own or operate. They are required under CERCLA to comply with all provisions of federal environmental statutes and regulations and all applicable state and local requirements during site cleanup.

#### 5.1.2 EPA's Oversight Role

EPA oversees federal facility cleanup activities and provides cleanup assistance to federal agencies. EPA's responsibilities include:

- listing sites on the NPL,
- negotiating IAGs,
- promoting community involvement through site-specific advisory boards and restoration advisory boards,
- selecting or assisting in the determination of cleanup remedies,
- · concurring with cleanup remedies,
- · providing technical advice and assistance,
- overseeing cleanup activities,

- reviewing federal agency pollution abatement plans, and
- resolving disputes regarding noncompliance.

To fulfill these responsibilities, EPA relies on personnel from Headquarters, Regional offices, and states. This includes personnel from the Federal Facilities Enforcement Office (FFEO) in the Office of Enforcement and Compliance Assurance (OECA) and the Federal Facilities Restoration and Reuse Office (FFRRO) in the Office of Solid Waste and Emergency Response.

To track the status of a federal facility, EPA uses several information systems. The Facility Index System provides an inventory of federal facilities subject to environmental regulations. Through the CERCLA Information System (CERCLIS), EPA maintains a comprehensive list of all reported potentially hazardous waste sites, including federal facility sites. CERCLIS also contains cleanup project schedules and achievements for federal facility sites. A list of federal facility sites potentially contaminated with hazardous waste, which is required by CERCLA Section 120(c), is made available to the public through the Federal Agency Hazardous Waste Compliance Docket and through routine docket updates published in the Federal Register.

#### 5.1.3 The Roles of States and Indian Tribes

Under the provisions of CERCLA Section 120(f), state and local governments are encouraged to participate in planning and selecting remedial actions to be taken at federal facility NPL sites within their jurisdiction. State and local government participation includes, but is not limited to, reviewing site information and developing studies, reports, and action plans for the site. EPA encourages states to become signatories to the IAGs that federal agencies must execute with EPA under CERCLA Section 120(e)(2). State participation in the CERCLA cleanup process is carried out under the provisions of CERCLA Section 121.

Cleanups at federal facility sites not listed on the NPL are carried out by the federal agency that owns or operates the site, often under state or EPA

oversight. Federal agencies use the CERCLA cleanup process outlined in the National Oil and Hazardous Substances Pollution Contingency Plan at these sites. In addition to CERCLA, these cleanups are subject to state laws regarding response actions. A state's role at a non-NPL federal facility site, therefore, will be determined both by the respective state's cleanup laws and CERCLA.

CERCLA Section 126 mandates that federally recognized Indian tribes be afforded substantially the same treatment as states with regard to most CERCLA provisions. Thus, the role of a qualifying Indian tribe in a federal facility cleanup would be substantially similar to that of a state. To qualify, a tribe must be federally recognized; have a tribal governing body that is currently performing governmental functions to promote the health, safety, and welfare of the affected population; and have jurisdiction over a site.

## 5.2 Fiscal Year 1995 Progress

FFEO and FFRRO, in conjunction with other EPA Headquarters offices, Regional offices, and states, ensure federal department and agency compliance with CERCLA and Resource Conservation and Recovery Act requirements. Progress in achieving federal facility compliance may be measured by the status of federal facility sites on the Federal Agency Hazardous Waste Compliance Docket and on the NPL, and by the execution of IAGs for federal facility sites.

# 5.2.1 Status of Facilities on the Federal Agency Hazardous Waste Compliance Docket

Federal facilities where hazardous waste is managed or from which hazardous substances have been released are identified on the Federal Agency Hazardous Waste Compliance Docket. The docket was established under CERCLA Section 120(c) and functions as an important record in the Superfund federal facilities program. Information submitted to EPA on identified facilities is compiled and maintained in the docket and then made available to the public.

The initial federal agency docket was published in the *Federal Register* on February 12, 1988. At that time, 1,095 federal facilities were listed on the docket. Most recently, the docket update of April 11, 1995, listed a total of 2,070 facilities. Of this total, the Department of Defense (DoD) owned or operated 933 (45 percent) of the facilities and the Department of the Interior (DOI) owned or operated 434 (21 percent). The remainder were distributed among 18 other federal departments, agencies, and instrumentalities.

#### 5.2.2 Status of Federal Facilities on the NPL

To distinguish the increasing number of federal facility NPL sites from non-federal NPL sites, NPL updates list federal facility sites separately from non-federal sites. NPL updates also contain language that clarifies the roles of EPA and other federal departments and agencies with regard to federal facility sites. Consistent with Executive Order 12580 and the National Oil and Hazardous Substances Pollution Contingency Plan, EPA is typically not the lead agency for federal facility sites on the NPL; federal agencies are usually lead agencies for their own facilities. EPA is, however, responsible for overseeing federal facility compliance with CERCLA.

At the end of FY95, there were 165 federal facility sites proposed to or listed on the NPL, including 160 final and five proposed sites. Sites that were deleted from these totals during FY95 included two sites that were proposed for listing, seven proposed sites that were listed as final, and three final sites.

Federal departments and agencies made substantial progress during FY95 toward cleaning up federal facility NPL sites. Activity at federal facility NPL sites during the year included the start of approximately 45 remedial investigation/feasibility studies (RI/FSs), 54 remedial designs (RDs), and 41 removals and 59 remedial actions (RAs). Also, 82 records of decision (RODs) were signed, and seven sites achieved construction completion. Ongoing activities at the end of FY95 included 475 RI/FSs, 71 RDs, and 109 RAs.

# 5.2.3 Interagency Agreements Under CERCLA Section 120

IAGs are the cornerstone of the enforcement program for federal facility NPL sites. They are enforceable documents and contain, among other things, a description of remedy selection alternatives, schedules of cleanup activities, and provisions for dispute resolution. During FY95, three CERCLA IAGs were executed to accomplish hazardous waste cleanup at federal facility NPL sites. Of the 160 final federal facility sites listed on the NPL, 99 were covered by enforceable agreements by the end of the fiscal year.

IAGs between EPA and each responsible federal department or agency, to which states may be signatories, address some or all of the phases of remedial activity (RI/FS, RD, RA, operation and maintenance) to be undertaken at a federal facility NPL site. IAGs formalize the schedule and procedures for submission and review of documents and include a timeline for remedial activities in accordance with the requirements of CERCLA Section 120(e). They also must comply with the public involvement requirements of CERCLA Section 117.

Included in IAG provisions are mechanisms for resolving disputes between the signatories. EPA can also assess stipulated penalties for noncompliance with the terms of IAGs. The agreements are enforceable by the states, and citizens may seek to enforce them through civil suits. Penalties may be imposed by the courts against federal departments and agencies in successful suits brought by states or citizens for failure to comply with IAGs.

# 5.3 Federal Facility Initiatives

The growing awareness of environmental contamination at federal facilities has increased the public demand for facility cleanup. To address this demand, EPA has worked to establish priorities for cleanup programs and thereby maximize the cleanups that can be accomplished with the limited resources available. EPA's federal facility offices (FFRRO and FFEO) continued their efforts to clean up closing military bases, accelerate cleanup, and address issues through interagency forums.

#### 5.3.1 Military Base Closure

During FY95, DoD, EPA and states continued to implement the Fast Track Cleanup Program for the Base Realignment And Closure (BRAC) Act. EPA's program activities were directed at working with the DoD and the states to achieve the goal of making property environmentally acceptable for transfer, while protecting human health and the environment at closing or realigning installations. Using resources provided under a Memorandum of Agreement with the DoD, EPA has participated on BRAC Cleanup Teams (BCTs) at 77 BRAC 1, 2, and 3 installations, 23 of which were NPL sites, and 54 were non-NPL. The BCT includes representatives from the military service, EPA, and the state regulatory agency.

Major components of the Fast Track Cleanup program include identifying uncontaminated parcels, accelerating cleanup, enhancing community involvement, facilitating lease agreements, encouraging removal actions, providing technical assistance at non-NPL bases, and integrating cleanup with economic development. The program aims to maximize and expedite the reuse of bases scheduled for closure in a manner consistent with the requirements of CERCLA Section 120 (h).

EPA's approach in supporting DoD's Fast Track Cleanup program was to follow the agreed upon Fast Track guidance. This guidance assigns an EPA Remedial Project Manager to each installation with a BCT. The key element of the Fast Track Cleanup success has been the establishment of BCT, at every major closing or realigning base. The BCT addresses cleanup and reuse issues and provides a forum for the open discussion of a wide range of technical and regulatory issues impacting the cleanup process, including issues germane to property transfer. EPA's expertise, early involvement, and experience with CERCLA cleanups have expedited the cleanup process, saved time, and avoided unnecessary costs.

In FY 1995, 100 full-time equivalent reimbursable positions were dedicated to supporting the BRAC program. Over 90 percent of the DoD resources were assigned to EPA's Regional offices.

The major achievements in FY95 of the Fast Track Cleanup program were:

- accelerated cleanup schedules made property available for transfer and economic reuse a combined total of over 1,069 months or nearly 90 years, were eliminated from the various parts of the environmental restoration process at 70 installations;
- avoided costs of \$120 million a success which was largely attributable to early involvement of all stakeholders and the participation of EPA's "in-house" technical experts; and
- greatly improved community involvement and trust in the cleanup process through assistance to the Restoration Advisory Board.

#### 5.3.2 Interagency Forums

Through its participation in interagency organizations, EPA made significant progress in addressing concerns associated with federal facility cleanup.

# Federal Facilities Environmental Restoration Dialogue Committee

The Federal Facilities Environmental Restoration Dialogue Committee (FFERDC), established in 1992 as an advisory committee under the Federal Advisory Committee Act, provided a forum for identifying and refining issues related to environmental restoration activities at federal facilities. During FY95, FFERDC held national discussions on improving the federal approach to environmental management and revised its February 1993 interim report, Recommendations for Improving the Federal Facilities Environmental Restoration Decision-Making and Priority-Setting Processes.

# **Defense Environmental Restoration Task Force**

EPA continued to participate in the Defense Environmental Restoration Task Force (DERTF). The goals of DERTF are to examine environmental issues associated with the cleanup and reuse of closing military installations and to identify and recommend ways to expedite and improve environmental response actions at military installations scheduled to be closed. During FY95, working groups established by DERTF addressed the following topics: fast track cleanup implementation, environmental baseline surveying, future land use, and public participation in cleanup and reuse decisions.

#### **BRAC Cleanup Teams**

EPA conducted BCT member training for BCTs, which were established in coordination with DoD and the states at all major installations scheduled for closure. EPA and DoD prepared and conducted bottom-up reviews of BRAC cleanup plans for closing installations, established restoration advisory boards (RABs) at closing installations, provided RAB training workshops, and determined, by consensus, the suitability of property to transfer or lease for reuse. As mandated by the Community Environmental Response Facilitation Act, EPA reviewed, and where appropriate, concurred in the identification of uncontaminated parcels of property that are part of an NPL site.

In addition, EPA HQ developed BCT training modules for new BCT members and in anticipation of more base closures, and BRAC specific policies such as the CERCLA 120 (h) (3) guidance to assist BCTs with their field work and the reuse acceleration.

#### **Environmental Management Advisory Board**

With DOE, EPA participated in the Department's Environmental Management Advisory Board. The Board consists of representatives from industry, academia, and the environmental community. It provides information, advice, and recommendations on issues confronting the national environmental management program. These issues include cleanup criteria and risk assessment, land use, priority setting, management effectiveness, cost-versus-benefit analyses, and strategies for determining the future national configuration of waste management and disposal facilities.

# 5.4 CERCLA Implementation at EPA Facilities

Of the 2,070 sites on the Federal Agency Hazardous Waste Compliance Docket at the end of FY95, 25 were EPA-owned or operated. Of these EPA-owned or operated sites, one was listed on the NPL. As required by CERCLA Section 120(e)(5), a report on cleanup progress at these 25 facilities is provided in Exhibit 5.4-1.

# 5.4.1 Requirements of CERCLA Section 120(e)(5)

CERCLA Section 120(e)(5) requires an annual report to Congress from each federal department, agency, or instrumentality on its progress in implementing Superfund at its facilities. Specifically, the annual report to Congress is to include, but need not be limited to, the following items:

- Section 120(e)(5)(A): A report on the progress in reaching IAGs under CERCLA Section 120(e)(2);
- Section 120(e)(5)(B): The specific cost estimates and budgetary proposals involved in each IAG;
- Section 120(e)(5)(C): A brief summary of the public comments regarding each proposed IAG;
- Section 120(e)(5)(D): A description of the instances in which no agreement (IAG) was reached;
- Section 120(e)(5)(E): A progress report on conducting RI/FSs required by CERCLA Section 120(e)(1) at NPL sites;
- Section 120(e)(5)(F): A progress report on remedial activities at sites listed on the NPL; and
- Section 120(e)(5)(G): A progress report on response activities at facilities that are not listed on the NPL.

CERCLA also requires that the annual report contain a detailed description, by state, of the status of each facility subject to Section 120(e)(5). The status report must include a description of the hazards presented by each facility, plans and schedules for initiating and completing response actions, enforcement status (where applicable), and an explanation of any postponement or failure to complete response actions. EPA gives high priority compliance with CERCLA maintaining requirements at its own facilities. concurrence with all environmental statutes, EPA uses its environmental compliance program to heighten regulatory awareness, identify potential compliance violations, and coordinate appropriate corrective action schedules at its laboratories and other research facilities.

# 5.4.2 Progress in Cleaning Up EPA Facilities Subject to Section 120 of CERCLA

At the end of FY95, the Federal Agency Hazardous Waste Compliance Docket listed 25 EPA-owned or operated facilities, including one that has been listed on the NPL (the Old Navy Dump/Manchester NPL site in Washington). Two of the sites (the Brunswick Facility in Brunswick, Georgia; and the Philadelphia Site in Philadelphia, Pennsylvania) listed previously and four of the sites (the Bay City CERT Site in Bay City, Michigan; the Electro Voice Site in Buchanan, Michigan; the Ottati & Goss Site in Kingston, New Hampshire; and Fine Petroleum in Norfolk, Virginia) listed in FY95 may have been listed on the docket in error. EPA is currently investigating those listings. EPA has evaluated and, as appropriate, undertaken response activities at the 25 sites list on the docket. As required by CERCLA Section 120(e)(5), Exhibit 5.4-1 provides the status, by state, of EPA-owned or operated sites and identifies the types of problems and progress of activities at each site. EPA facilities that have undergone significant response activities in FY95 are discussed in detail below. As required for EPA-owned or operated NPL sites, the information presented below for the Old Navy Dump/Manchester NPL Site provides a report on progress in meeting CERCLA Section 120 requirements for reaching IAGs, conducting RI/FSs, and providing information on the status of remedial activities.

EPA-owned or operated sites on the docket, the information presented below provides a report on progress in conducting response activities at the facilities.

# National Air and Radiation Environmental Laboratory, Alabama

EPA's air and radiation laboratory formerly operated at a site near its current location at Gunter Air Force Base in Montgomery, Alabama. During operations at the original site, waste solvents, including xylene and benzene, were discharged into a pit adjacent to the laboratory building. releases were identified by EPA's internal auditing The site was remediated initially by removing the accessible contaminated soil and replacing it with uncontaminated soil. Then EPA, in conjunction with the Underground Injection Control Program of the Alabama Department of Environmental Management, determined the extent of the remaining contamination and developed an appropriate mitigation program. EPA is monitoring the ground-water wells on the property regularly and initiating a program to pump ground water from the contaminated area.

#### Casmalia Resources, California

The Casmalia Resources Hazardous Waste Facility operated as a commercial hazardous waste treatment, storage, and disposal facility from 1973 to 1989. During this time period, the facility accepted billions of pounds of waste materials. Subsequently, efforts to close the facility properly and permanently were abandoned by the owner/operators. In 1992, the State of California requested EPA step in as the lead regulatory agency. EPA has since undertaken emergency response activities while seeking voluntary cleanup by PRPs.

# New England Regional Laboratory, Massachusetts

An underground oil storage tank was replaced at the New England Regional Laboratory in October 1993. During excavation, the cavity left by the old tank filled with water and developed a sheen. The laboratory was given a National Pollutant Discharge Elimination System (NPDES) permit exclusion and allowed to pump the water because tank inspection and water analysis indicated that no leaks were present and no groundwater contamination occurred. The laboratory continues to improve its environment, safety, and health program with regular audits by the Safety, Health, and Environmental Management Program (SHEMP).

#### **EPA Central Regional Laboratory, Maryland**

EPA conducted an on-site investigation of ground-water contamination at the EPA Central Regional Laboratory in Annapolis, Maryland. Although the State of Maryland is satisfied that hazardous substances have not been released into the environment and that further response action is not required, the Agency installed a homogenizing tank and continued to maintain monitoring wells at the site. The laboratory was given the status of "no further remedial action planned" (NFRAP) on April 7, 1994.

#### Bay City CERT Site, Michigan

EPA was authorized by Congress to purchase property for the construction of a Center for Ecological Research and Training (CERT) in Bay City, Michigan. A preliminary site characterization and three subsequent phases of site characterization were performed on the approximately 90 acre (25 parcel) site. Field investigations (Phase II and Phase III) began in FY93 continued through FY95. Results of the investigations showed that localized areas of the CERT site had been impacted by past onsite and offsite land usage and related activities. Potential environmental liabilities at the site and costs associated with remediation of these liabilities were also identified. Authorization and funding was rescinded in FY94 halting the CERT project. EPA had acquired six of the 25 parcels at that time. During the investigation, miscellaneous drums deposited by unknown parties were discovered on two of the EPA owned parcels.

#### Electro Voice, Michigan

The Electro Voice site has been occupied by several manufacturing companies since the 1920s. Demolitions refuse was deposited in an onsite natural land depression from the 1920s to the early 1950s.

Portions of Electro Voice, Inc.'s facilities have been built upon this fill. Electro Voice built two lagoons for the purpose of disposing electroplating waste in 1952. The lagoons were removed from service in 1962 and a wastewater treatment facility was installed. In 1979, an industrial sewer link broke discharging liquid waste into the north lagoon. Electro Voice responded to this spill by treating and removing the discharge and installing a holding tank to prevent similar incidents. The lagoons were closed and backfilled in 1980. In 1987, EPA and Electro Voice entered into a Consent Order requiring the company to carry out a feasibility study of site contamination. The study was completed by the EPA in September of 1991. Final remedies were selected for the lagoon area, onsite groundwater, and dry well area soils. The design is projected to be completed by 1996.

# Ottati & Goss Superfund Site, New Hampshire

The Ottati & Goss Superfund Site was used by several companies and corporations for the purposes of drum reconditioning operations from 1959 until 1980. The site was used by Ottati & Goss from March 1978 until July 1979 as a hazardous materials processing and storage facility. An RI/FS conducted in 1986 revealed that groundwater under the site was contaminated well above drinking water standards. The investigation also found a significant amount of soil and sediment contaminated above levels protective of human health and the environment. EPA conducted emergency removal actions at the site between December of 1980 and July of 1982. PRPs performed partial soil cleanup remediation at the site in 1989. The first remedial design began in 1993 and will be completed in 1996.

#### **EPA Edison Facilities, New Jersey**

The EPA Edison Facilities site was formerly the Raritan Depot, which was owned by DoD and used for munitions testing and storage. In 1963, the General Services Administration (GSA) took possession of the property and, in 1988, transferred approximately 200 acres of the site to EPA. Although residual contamination from past DoD and GSA activities at the facility persists, EPA has not stored, released, or disposed of any hazardous

substances on the property. A site inspection was conducted in FY91, following the discovery of a contaminated surface-water impoundment. The investigation resulted in the implementation of interim clean-up actions. Response activities have included spraying a rubble pile containing asbestos with a bituminous sealant; removing the liquid in the surface impoundment, excavating soil, installing a liner, and backfilling the impoundment with clean material; excavating and storing munitions; and removing underground storage tanks. EPA expects that DoD will pursue additional clean-up work at the site.

#### Fine Petroleum, Virginia

·The Fine Petroleum/Mariner HiTech site has been a paint and paint-related product recycling facility since the late 1960s. Approximately 13,000 containers with capacities ranging from 1 quart to 55 gallons were discovered in varying stages of decay in a field on the approximately 3 acre property. EPA performed a sampling assessment in July 1992 leading to a removal action in 1993 in which 26,330 gallons of paint and paint-related materials were removed. In May 1995, a fire occurred at the sole building on the property which housed numerous containers of hazardous substances. Following the fire, engineer evaluations indicated the warehouse to be structurally unsound. A runoff barrier was erected and air monitoring was conducted around the perimeter of the building's remains. A total of 365, 55-gallon drums of reportable quantity wastes, approximately 1120 cubic yards of non-hazardous demolition debris, and 916 tons of non-hazardous, petroleum-impacted soil was removed during this 1995 event.

# Old Navy Dump/Manchester NPL Site, Washington

EPA acquired this former Navy site from DoD in 1970 and used the land to construct an environmental testing laboratory in 1978. The property is also used for two other environmental laboratories run by the National Marine Fisheries Service and the Washington State Department of Ecology. The property adjacent to the laboratories had been used by the Navy to conduct firefighting training exercises, maintain metal anti-submarine nets, and

serve as a Navy landfill. Investigations of the property history revealed that in the 1940s and 1950s, the Navy had used a lagoon on the property to dispose of metal debris and other waste from the nearby Bremerton Naval Shipyard. Also, chemical residues from the Navy firefighting training school had been allowed to drain into the ground. In FY93, a preliminary assessment and site inspection of the property revealed the presence of hazardous substances in the soil, sediment, and surface-water run off. In January 1994, EPA proposed the site to the NPL, and in June 1994, EPA listed the site on the NPL.

Because the site is a former Navy site, the Defense Environmental Restoration Program for Formerly Used Defense Sites (FUDS) will provide funding for evaluating and correcting the hazardous conditions. Negotiations for an IAG for site cleanup were initiated in July 1994 and were ongoing as of the end of the fiscal year. Also during the year, the Seattle District of the U.S. Army Corps of Engineers was authorized under the Department of Defense's Environmental Restoration Program for FUDs to perform an RI/FS of the Old Navy Dump/Manchester NPL Site (FUDS Site No. F10WA011900) and to prepare a proposed plan and ROD. The RI/FS was initiated in FY95.

Exhibit 5.4-1
Status of EPA Facilities on the Federal Agency Hazardous Waste Compliance Docket\*

	tus of EFA Facilities on the Federal A		
State	EPA Facility	Known or Suspected Problems	Project Status
AL	National Air and Radiation Environment Laboratory (formerly known as the Eastern Environmental Radiation Facility)	Soil and groundwater contamination	Groundwater remediation efforts being implemented
CA	Casmalia Resources	Groundwater contamination, hazardous waste landfill	Remedial action in progress
MA	New England Regional Laboratory	Oil sheen detected during tank upgrade, packaged sample leak, no contamination	NPDES Permit Exclusion granted prior to present fiscal year, Pollution Prevention Plan signed
MD	EPA Central Regional Laboratory	No contamination	No further remedial action planned
: MI	Bay City CERT Site	Miscellaneous drums discovered on EPA owned parcels	Funding halted in for CERT project in previous fiscal year, site characterization work underway.
MI	Electro Voice	Electroplating waste contamination	Groundwater remediation systems in operation
NH	Ottati & Goss Superfund Site	Groundwater, soil, and sediment contamination	Remedial design stage
NJ	EPA Edison Facilities (formerly known as the Raritan Depot)	No contamination that poses a threat to the environment	Removal actions performed on non-EPA owned acreage, continuing investigations
VA	Fine Petroleum	Decaying containers of hazardous materials	Removal actions underway
WA	Old Navy Dump/Manchester NPL Site (formerly known as the Region 10 Environmental Services Division Laboratory)	Soil and sediment contamination attributable to DoD ownership	Remedial investigation/feasibility study started

Source: Hazardous Waste Compliance Docket and the Office of Administration and Resource Management.

\* This list does not include the following 15 EPA facilities with completed remedial activities that have either been conditionally exempt from PA requirements or were placed on the docket in error. These facilities include the Andrew W. Breidenback Environmental Research Ctr., Ann Arbor Motor Vehicle Lab., Brunswick Facility, Center Hill Hazardous Waste Engineering Research Lab., Combustion Research Facility-AR, Corvallis Environmental Research Lab., Houston Laboratory, Mobile Incinerator-Demmry Farm, National Enforcement Investigation Ctr., Philadelphia Site, Region 5 Environmental Services Division Lab., Region 7 Environmental Services Division Lab., Technology Center-NC, Testing and Evaluation Facility-OH, and Washington Headquarters.

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# Chapter 6 Resource Estimates

Section 301(h)(1)(G) of CERCLA requires EPA to estimate the resources needed by the federal government to complete Superfund implementation. The Agency interprets this requirement to be a report on the cost of completing cleanup at sites currently on the National Priorities List (NPL). Much of this work will occur after FY95.

Section 6.1 of this chapter includes annual information on Trust Fund resources needed by EPA and other federal departments and agencies through FY95, and on the allocation of the resources for FY95 and FY96. An overview of the method used to estimate the long-term costs associated with site cleanup is contained in Section 6.2, and an estimate of the long-term costs of cleaning up sites on the existing NPL is contained in Section 6.3. The estimate includes Trust Fund resource projections for EPA and other Superfund allocations to other federal departments and agencies for FY96 and beyond.

The long-term estimate provided in Section 6.3 is based primarily on the resources required to carry out the responsibilities and duties assigned to EPA and other federal departments and agencies by Executive Order 12580. To compute the estimate. EPA must make assumptions about the size and scope of the Superfund program, the nature and number of response actions, the level of participation by states and private parties, and the use of treatment technologies. For active NPL sites (those that have reached or passed the remedial investigation/ feasibility study [RI/FS] planning stage), these assumptions relate to management of the workload already in the remedial pipeline and the costs of those actions. For NPL sites that have not yet entered the RI/FS planning stage, assumptions are

made about which activities will be necessary to clean up the sites and delete them from the NPL.

In developing the long-term resource estimate, EPA considered several sources of information:

- EPA Superfund budgets for FY92 through FY96, including budgets allocations to other federal departments and agencies;
- The Federal Agency Hazardous Waste Compliance Docket developed under Section 120(c) of CERCLA and each federal department's and agency's annual report to Congress on federal facility cleanup as required under Section 120(e)(5) of CERCLA; and
- Various EPA information systems, primarily the CERCLA Information System (CERCLIS) and the Integrated Financial Management System.

Specifically, EPA has estimated resource needs for FY96 and beyond. This long-term effort has been coordinated with the development of the FY96 budget: In conjunction with the revised National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and its policies affecting program direction and scope, EPA continues to refine the complete cost estimate for implementing CERCLA. The Agency is working to improve data quality, refine cost estimating methods, and collect additional information.

EPA's ability to project the federal resource requirement for CERCLA implementation improves each year as more experience is gained. Improved coordination with other federal departments and agencies and additional data on the implementation of the federal facilities requirement of Section 120 also will increase the accuracy of future resource estimates.

# 6.1 Source and Application of Resources

Since the enactment of CERCLA in 1980, Congress has provided Superfund with \$15.0 billion in budget authority (FY81 through FY95). This estimate includes \$1.8 billion for FY81 through FY86 and \$13.3 billion for the post-SARA period, FY87 through FY95. The FY95 budget allocated total resources of \$1.5 billion for the following activities:

- EPA Response Activities (62.5 percent): Response activities include site assessment, time-critical and non-time-critical removals, long-term cleanup actions, and program implementation activities. Also included is support provided by the Office of Water, Office of Indoor Air and Radiation, Office of Program Planning and Evaluation, and Office of Administration.
- Other Federal Agencies Response Activities (9.5
  percent): Agencies included are: Department of
  Agriculture, Department of Commerce,
  Department of Defense, Department of Energy,
  Federal Emergency Management Agency,

General Services Administration, Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, National Institute of Environmental Health Sciences, Department of the Interior, Department of Justice, Department of Labor, National Aeronautics and Space Administration, Tennessee Valley Authority, Department of Transportation, and Department of Veterans Affairs.

- EPA's Enforcement Activities (14.8 percent): Enforcement activities include PRP negotiations, litigation, and settlements and cost recovery efforts.
- Management and Support (8.7 percent): This
  category includes program analysis provided by
  the Office of Program Planning and Evaluation;
  personnel, contracting and financial management
  services from the Office of Administration and
  Resources Management; legal services provided
  by the Office of General Counsel; and the audit
  function provided by the Office of the Inspector
  General.
- Research and Development (4.5 percent): Research and development resources are used for technical support and for developing and evaluating faster, better and less expensive methodologies and technologies in the areas of site characterization, risk assessment,

Exhibit 6.1-1
EPA Superfund Obligations
(in Millions)

Program Area	FY94 Operating Plan	FY95 Operating Plan
Response Activities (Total)  EPA  Other Federal Agencies	\$1,123.4 996.6 126.8	\$1,030.03 893.9 136.4
Enforcement Activities	209.9	212.3
Management and Support	101.9	124.8
Research and Development	61.9	63.9
Total Superfund	\$1,497.1	\$1,431.3

Source: Senior Management Report FY95.

monitoring, remedy selection and remedy design, and construction and operations.

Exhibit 6.1-1 presents the actual obligations of Superfund resources for FY94 and FY95 within these categories. The snapshot data is from EPA's Senior Management Report.

# 6.1.1 Estimating the Scope of Cleanup

Site cleanup is the single largest category of Superfund expenditures and is expected to remain so in the future. To project EPA funding needs for cleanup activities, several key estimations were made including

- The projected number and average cost of studies, remedial designs (RDs), and remedial actions (RAs) undertaken;
- · The extent and cost of removal activity; and
- The proportion of direct cleanup actions undertaken by PRPs.

# 6.1.2 PRP Contributions to the Cleanup Effort

The most significant way PRPs contribute to the hazardous substance cleanup effort is by conducting and financing response actions (whether voluntarily or under order). When PRPs finance site cleanup efforts, potential EPA Superfund obligations for those sites are dramatically reduced and the remaining principal cost is PRP oversight. EPA continues to develop and implement policies designed to encourage PRP cleanups.

In addition to response actions actually performed by PRPs, a portion of the costs of certain Fund-financed response actions will be recovered from PRPs through enforcement activities. Typically, there are delays of several years between expenditures from the Trust Fund and recovery of costs.

# 6.2 Resource Model Assumptions

Estimating the cost of cleaning up current NPL sites depends on a number of factors, many of which will change as the program continues to mature. The main factors are:

- Changes in Superfund program policies and procedures because of the revised NCP, particularly the cleanup standards as required under Section 121 of CERCLA;
- Changes in the remedial program because of revisions to the Hazard Ranking System, as required under Section 105 of CERCLA;
- The long period required to identify, develop, select, and construct a remedy, and the need for. scheduling flexibility to maximize the impact of enforcement activities;
- The level of state Superfund program activity;
- The level of PRP participation in the program;
- Changes in cleanup approaches, such as implementing more early actions in favor of remedial actions; and
- The nature of and demand for removal actions.

Based on these factors, EPA uses the Outyear Liability Model (OLM) to estimate the long-term resource needs of the Superfund program. The OLM provides meaningful long-range forecasts, has the flexibility to refine forecasts, and can be adjusted for a large number of program-related variables. These variables can be individually adjusted to reflect actual or anticipated changes in the program. The four primary cost categories used in the OLM to estimate the long-term resources required to clean up the existing NPL sites are

- Active NPL sites;
- NPL sites where the remedial process has not yet begun;
- Non-site activities; and

#### RA costs.

EPA's estimate of resources required to clean up the existing NPL sites is provided in Section 6.3. To develop this estimate, the Agency has concentrated on remedial and removal activities. These activities are the major components of the Superfund program and account for the majority of Fund expenditures by the Agency.

## 6.2.1 Active NPL Sites

Remedial efforts are underway at most of the sites on the current NPL. Remedial plans are being developed for the remaining sites on the NPL, leaving 90 sites on the existing NPL pending study at the end of FY95.

Data on the active NPL sites are stored in CERCLIS and incorporated into the OLM to present the most accurate picture of planned activities. The OLM estimates ancillary activities for sites at which some level of planning or remediation activity is underway. Because most of the existing NPL sites are active, they constitute a large portion of the total liability estimate.

In addition to planned remedial activities, enforcement activities have a significant impact on the costs of addressing Superfund sites. All enforcement activities are estimated by the model according to past program experience and several standard sequences of activities, each representing a different enforcement approach. Enforcement-related variables within the model include costs, workyears, and the shift in remedial costs when Superfund assumes responsibility from, or passes responsibility to, a PRP. As with remedial activities, most enforcement costs and workyears are estimated.

# 6.2.2 Sites Yet to Begin the Remedial Process

The OLM uses the same general approach for sites where the remedial process has yet to begin. Cleaning up an NPL site involves a number of different activities occurring over time and in predictable arrangements. For sites where the remedial process has yet to begin, the OLM must first approximate the activities that will be involved

when remediation of the sites begins. Approximations are made by applying several generic activity sequences to the number of sites being estimated. When the activities have been set, cost and workyear pricing factors are applied to estimate the necessary resources. A consistent approach is used for all site activities, both remedial and enforcement. In the approach, tradeoffs such as avoiding cleanup costs but incurring PRP oversight costs are handled automatically as assumptions are adjusted.

The OLM includes a library of different activity sequences. Each sequence represents a typical site and involves different activities, durations, and schedules. In addition to the key activity starts discussed above, the OLM includes a number of other factors to control the mix of these activity sequences.

## 6.2.3 Non-Site Costs

Although non-site activities comprise a substantial portion of the budget, individually they are fairly small and stable. For these reasons, resource needs for these activities are estimated by applying annual growth factors to the levels included in the requested budget for the current year.

Aside from the number of sites requiring cleanup and the cost of individual cleanups, the assumption of managerial and financial responsibility for a site has the largest potential impact on the cost of the Superfund program. There are many factors involved in establishing who is responsible for a site (referred to as the site lead), including

- Level of emphasis on enforcement;
- Willingness of states to assume financial responsibility; and
- Cost-sharing arrangements between Superfund and the states and between Superfund and the PRPs.

The model accommodates each of these factors with one or more variables, allowing the estimation of Superfund liabilities across a wide range of site-lead and cost-sharing scenarios. Site variables include:

- Proportion of sites addressed by each lead category (Fund, PRP, state, and state enforcement);
- Number of sites that are owned and/or operated by state or local governments; and
- Number of sites that follow each of several enforcement paths.

Choices among these variables generally affect both cost and duration of the program. Increases in PRP leads will ultimately result in lower Fund costs, but related litigation will substantially extend the amount of time required to reach deletion of a site from the NPL.

# 6.3 Estimated Resources to Complete Cleanup

As illustrated in Exhibit 6.3-1, EPA's estimate of the total liability to complete cleanup of existing NPL sites is \$31.1 billion. This total includes the OLM long-term estimate of \$16.1 billion for FY96 and beyond. Major assumptions shaping the long-term estimate are as follows:

 Only the cost of the sites currently proposed to or listed on the NPL (1,374 sites, including 1,232 final, 52 proposed, 2 deferred, and 88 deleted sites as of September 30, 1995) is included.

- Removal activities at sites on the NPL remain at current levels.
- The RA cost factor is estimated at \$8.3 million per RA (in 1994 dollars) based on an analysis of RODs signed from 1990 through 1994. This analysis substantially improves previous analyses by evaluating RODs in current year dollars, changing assumptions about ROD cost growth, and using a five-year average of ROD data to better depict changing trends in RA estimates.
- Program support and other non-site elements are straightlined at the levels of the current request year budget (FY96 President's budget).
- Approximately 45 percent of all new RI/FS starts will be Fund-financed.
- For non-federal facility sites, PRPs will take the lead on 75 percent of the RAs. (Because oversight is significantly less expensive than cleanup, Fund costs drop dramatically when PRPs assume financial responsibility for more cleanups.)
- No resource and programmatic assumptions for federal facility sites are included in the OLM.
   The OLM does not generate a resource estimate for the federal facility program.

Assumptions about the future reflect planning assumptions from the Superfund Program Management Manual and historical performance averages, both of which are revised periodically. EPA will continue to monitor developments that

Exhibit 6.3-1
Estimate of Total Trust Liability to Complete Cleanup at Sites on the National Priorities List
(in Billions)

	Total Allocations
FY95 and Prior	\$15.0
FY96 and Beyond	16.1
Total	\$31.1

Source: Superfund Budget Documentation and Outyear Liability Model

affect program costs. Changes will be incorporated into the model as they occur, improving depiction of future programmatic direction and refining previous analysis. OLM estimates will vary over time as a result, and subsequent editions of this Report will most likely contain revised estimates.

# 6.4 Estimated Resources for Other Executive Branch Departments and Agencies

The second element in fulfilling the requirements of Section 301(h)(1)(G) of CERCLA is providing an estimation of the resources needed by other federal departments and agencies. The Superfund resource needs of the other Executive Branch departments and agencies are met through two sources: the Superfund Trust Fund and the individual federal department's or agency's budget.

Trust Fund monies are provided to other federal departments and agencies through two mechanisms:

- Interagency Budgets: EPA provides Trust Fund monies to other federal departments and agencies that support EPA's Superfund efforts. Transfers are accomplished through an interagency budget under Executive Order 12580.
- Site-Specific Agreements: EPA also provides money from the Trust Fund to other federal departments and agencies through site-specific agreements.

Federal departments and agencies also provide support to Superfund activities through CERCLA-Specific Funds and general funds of the department or agency. Exhibit 6.4-1 summarizes the other federal departments and agencies that receive Trust Fund monies. The information below shows a breakdown of funding provided by EPA to other federal agencies and departments for their Superfund cleanup needs. (Please see individual agency and department annual reports for specific site cleanup costs and descriptions.)

# Exhibit 6.4-1 List of Departments and Agencies Receiving Trust Fund Monies

Department of Agriculture
National Oceanic and Atmospheric Administration
Department of Defense
Department of Energy
Federal Emergency Management Agency
General Services Administration
Agency for Toxic Substances & Disease Registry
National Institute for Environmental Sciences
Department of Interior
Department of Justice
Occupational Safety and Health Administration
National Aeronautics and Space Administration
Tennessee Valley Authority
Department of Transportation
Department of Veterans Affairs

# Chapter 7 Superfund Program Support Activities

# 7.1 Overview of Program Support Activities

The Superfund program's other support activities primarily focus on enhancing community involvement, disseminating public information, and promoting partnerships with states and Indian tribes. This section provides an overview of new and ongoing program support activities conducted by the Superfund program during FY95.

## 7.1.1 Community Involvement

Superfund's community involvement efforts demonstrate EPA's commitment to informing potentially affected citizens about Superfund sites and involving them in the cleanup process. EPA focuses on:

- Informing the public of planned or ongoing actions;
- Giving the public an opportunity to comment on and provide input for technical decisions; and
- Identifying and resolving conflicts.

The guideline for EPA's proactive community involvement effort is "early, often, and always." EPA is committed to beginning outreach activities early in the Superfund process, meeting with citizens on a regular basis, and always listening to citizens' concerns.

EPA's policy of enhancing community involvement is demonstrated by its continued efforts

to tailor community involvement activities to each community's needs and to identify effective approaches for reaching concerned citizens. Each community is unique and requires an individual communication strategy. EPA, while satisfying statutory and regulatory requirements, also promotes the following innovative involvement techniques:

- Sponsoring open houses and public availability sessions for local citizens to meet one-on-one with EPA Superfund site teams to discuss community concerns or site information;
- Promoting greater public understanding and encouraging public participation in site activities using various media, such as public access television and public monitoring equipment, to convey information from EPA to local citizens; and
- Conducting introduction to Superfund workshops and video presentations to educate affected citizens about the Superfund cleanup process and opportunities for involvement in the process.

Under the Superfund Accelerated Cleanup Model (SACM) and Superfund Administrative Improvements, the Agency remains committed to promoting meaningful community involvement in decision-making during all phases of site cleanup. EPA views early and frequent community involvement as critical to the success of EPA's mission to protect human health and the environment. The Agency continued offering technical assistance grants (TAGs) to communities to enable them to participate more fully in Superfund

cleanup and decision making. Other efforts include the establishment of community advisory groups (CAGs).

#### Fiscal Year 1995 Highlights

During FY95, EPA continued to improve the vigorous community involvement efforts by emphasizing the importance of public participation through it's Superfund administrative improvements. In addition, the Agency continued to provide a technical outreach program for communities, held a national conference on community involvement, and offered training and workshops to communities. A national Superfund Community Involvement Conference held in New York, New York, brought together community involvement managers and coordinators from across the country to discuss issues such as innovative techniques for reaching hard-topopulations community-based reach and environmental protection. Finally, the program began developing a Superfund jobs training program, modeled after the Housing and Urban Development's Step-Up program, during FY95.

# **Enhanced Community Involvement Through Administrative Improvements**

The enhancement of meaningful community involvement is one of the areas where EPA is changing Superfund through the administrative improvements. Efforts focused on identifying ways to increase community involvement in the Superfund program, enhance outreach between EPA and communities, and ensure environmental justice by addressing concerns of minority and low-income communities.

EPA also held a national community involvement conference that provided Regional personnel with an opportunity to share information and discuss issues of national concern.

# Technical Outreach Services for Communities

The Agency continued support for the technical outreach program that expands EPA's tools for community outreach by providing an alternative, independent source of technical information. EPA's Office of Research and Development's Office of Exploratory Research provides a national network of five hazardous substance research centers (HSRCs). Authorized by SARA Title III, Section 311(d), the HSRCs are supported by a network of 23 universities nationwide. On a budget of \$125,000, each HSRC supports two EPA Regions and provides technology transfer and training. The HSRCs also provide services that are flexible and tailored to each community's needs. For example, the technical expert at the HSRC may review site-related documents, attend public meetings, explain technical process information, or provide an independent assessment of site activities.

#### **Community Advisory Groups**

During FY95, the Agency worked on developing guidance to encourage the Regions to establish CAGs. CAGs are committees, task forces, or boards made up of citizens with diverse community interests that provide a public forum for discussing the needs and concerns of the community about the decision making process at Superfund sites. Based on the success of early CAG pilots, EPA continued to develop the CAG program.

# Superfund Community Relations Skills Course

EPA offered the Superfund Community Relations Skills course five times and instructed more than 100 participants in FY95. The course ensured EPA staff members are equipped with the latest community involvement skills and techniques, and that they have a thorough understanding of community relations requirements at Superfund sites.

# Introduction to Superfund Workshop Development

EPA developed a national course using a national workshop format and delivered course materials to 10 EPA Regions. The workshop serves as a tool to allow EPA Regions to educate public on the basic CERCLA statutory and regulatory framework.

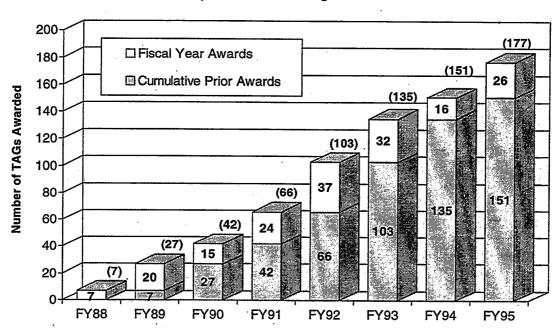


Exhibit 7.1-1
Number of Technical Assistance Grants Awarded from Fiscal Year 1988 Through Fiscal Year 1995

Source: Office of Emergency and Remedial Response. September 30, 1995.

# Technical Assistance Grants Under CERCLA Section 117(e)

The TAG Program, authorized by CERCLA Section 117(e), as amended by SARA, provides eligible communities affected by NPL sites with grant funds to hire independent technical advisors. Only communities affected by sites listed on the NPL or sites proposed to the NPL with response actions underway are eligible for such funds. By allowing communities to hire independent advisors, TAGs enable communities to become more knowledgeable about the technical and scientific aspects of a Superfund site. Communities are able to participate in the decision making process surrounding their sites using their increased understanding of sitespecific cleanup strategies. Because TAG regulations require recipients to share their information with the entire affected community, the broader community benefits as well. Initial TAG awards are for \$50,000, but additional funds are available for more complex sites.

As illustrated in Exhibit 7.1-1, since the TAG program began in FY88, EPA has awarded 177 TAGs, which are worth more than \$9 million to support community involvement in Superfund cleanup. This total includes 26 TAGs awarded during FY95. Because of the benefits of the TAGs, many TAG recipients choose not to close-out their grant award as they mature, but rather request additional funds through a waiver or deviation. More than \$1.5 million additional grant dollars have been awarded through waivers and deviations.

#### 7.1.2 Public Information

# A Coordinated Approach to Public Information

The Agency's public information outreach program is built on a system of information coordination and management. Under this program, EPA is committed to providing quick public access to high-quality documents.

All Superfund documents available to the public are listed in the Catalog of Superfund Program Information Products and its regular update bulletins. Copies of the catalog and updates are available from the Superfund Document Center or from the Department of Commerce's National Technical Information Service (NTIS). Electronic access to the catalog and updates is available through Agency internal electronic bulletin boards or through the NTIS FEDWORLD gateway to the Internet system which is advertised nationwide to the general public.

During FY95, EPA continued to participate in the full implementation of the EPA-NTIS Superfund partnership, a comprehensive interagency effort to provide maximum public access to Superfund documents. Through this partnership, the Agency and NTIS conduct an outreach and marketing program to inform the public about the availability of Superfund documents from NTIS. This partnership effort has provided the public with rapid delivery of Superfund documents and has conserved EPA resources.

The public can also access information about Superfund through other information sources, such as the Superfund Docket and the Resource Conservation and Recovery Act (RCRA)/Superfund Hotline. Further information on public information services is provided below.

#### The National Technical Information Service

The Department of Commerce's NTIS serves as a permanent archive and general source of federal publications, including Superfund documents. Before the EPA-NTIS partnership, EPA had fulfilled requests for more than two million documents free of charge. Due to resource constraints, however, free document distribution was no longer possible. To fulfill its commitment to ensure that Superfund documents are available to the public, EPA has worked to maximize public access to and promote the availability of Superfund documents through NTIS.

The Agency's joint effort with NTIS provides the public with ready access to the entire Superfund collection. Using NTIS employees provided considerable savings to the government and facilitates access to the many production services housed at the NTIS headquarters in Springfield, Virginia.

NTIS also maintains a Superfund Order Desk where users may purchase single copies of documents or customized subscriptions for categories of documents pertinent to their needs. Prepublication documents are available at the Superfund Order Desk prior to being formally printed and distributed.

In other FY95 efforts, EPA broadened it's use of electronic tools such as the Internet and multimedia computers to increase communication between Superfund stakeholders and to improve access to Superfund information. Homepages for Superfund and for each of the Regions are posted on the Internet. The relative number of visits to these websites continues to increase.

#### The Superfund Docket

The Superfund Docket provides public access to the materials that support proposed and final regulations. In compliance with the Freedom of Information Act, the public is allowed access to docket materials following approval of the material by the Office of General Counsel and announcement of the proposed or final regulation in the Federal Register.

#### **Other Information Sources**

The RCRA/Superfund Hotline, managed by EPA Headquarters, provides information to the public and EPA personnel concerning hazardous waste regulations and policies. The hotline is a comprehensive source of general information about ongoing Superfund program developments.

EPA also maintains the Hazardous Waste Superfund Collection at EPA Headquarters and Regional libraries. The collection contains documents ranging from records of decision to commercially produced books on hazardous waste and the Superfund program.

# 7.1.3 EPA's Partnership with States and Indian Tribes

EPA continues to promote and maintain its partnership with states, federally recognized Indian tribes, commonwealths, territories, and political subdivisions in the Superfund cleanup process. (States, commonwealths, and territories will be referred to as states for the purposes of this Report.) Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) provides mechanisms for ensuring meaningful state and tribal involvement in implementing Superfund response activities, as required by Sections 104 and 121(f) of CERCLA. Subpart O of 40 CFR Part 35 provides additional detail on requirements for transferring funds and responsibilities to states and Indian tribes to undertake response actions, as well as on building their overall program capabilities.

The following sections describe response agreements and Core Program cooperative agreements (CPCAs) between EPA and states, tribes, or political subdivisions because these agreements serve as a tool to enable states to participate in the Superfund cleanup process. In addition, FY95 highlights of EPA efforts to promote involvement of states and Indian tribes in Superfund response activities are provided.

# Response Agreements and Core Program Cooperative Agreements

Response agreements provide states, tribes, and political subdivisions with the opportunity to participate in response activities at sites under their jurisdiction. Superfund CPCAs assist states and tribes in developing their overall Superfund response capabilities. This section discusses each type of agreement in detail.

#### **Response Agreements**

Response agreements fall into two categories: Superfund state contract (SSCs) and cooperative agreements (CAs). Both serve as the contractual tools through which states, tribes, and political subdivisions work with EPA to conduct or support Superfund response activities.

SSCs and remedial action CAs document assurances required from a state, tribe, or political subdivision by CERCLA Section 104. Before EPA provides funding to conduct a remedial action (RA) in a state (i.e., a Fund-financed RA), for example, the state must provide the Agency with the following assurances, required by CERCLA Section 104 and formalized in the SSC or remedial action CA:

- Provide for 100 percent of RA operation and maintenance;
- Provide 10 percent of the RA cost;
- Ensure the availability of a 20-year capacity for the disposal or treatment of hazardous wastes;
- · Provide for off-site disposal, if necessary; and
- Acquire or accept transfer of interest in property, if necessary.

Assurances are not required for Fund-financed response actions that are not RAs. Where a state or a political subdivision was an operator at the facility at the time when hazardous substances were disposed, however, the state must provide at least 50 percent of the cost of the removal, remedial planning, and RA in cases where a CERCLA-funded RA is conducted. Tribes are exempt from providing most of the CERCLA assurances, but may need to provide the assurance to acquire or accept interest in property in certain cases. The following sections describe SSCs and CAs.

Superfund State Contracts: A state or tribe must enter into an SSC with the Agency when EPA conducts (i.e., is the lead for) a Fund-financed RA. The SSC, which must be signed before EPA conducts the RA, documents the CERCLA assurances that have been made with a State or Indian tribe. The SCC also includes provisions detailing the cost-share required and specifying the process for the collection of cost-share payments.

A three-party SSC among the state/political subdivision/EPA is required when a political subdivision assumes the lead for remedial activities. The three-party SSC parties include EPA, the state, and the political subdivision. The SSC must be in

place before EPA can transfer funds, through a remedial CA, to the political subdivision. Also, although the political subdivision will conduct the remedial activity, the state still is responsible for providing the required CERCLA assurances in the SSC.

Cooperative Agreements: Superfund CAs are the vehicle through which EPA provides funds to states, tribes, and political subdivisions to ensure their meaningful involvement in implementing Superfund. The following five types of response CAs, described in 40 CFR Part 35 Subpart O, are available for site-specific response activities:

- Pre-remedial CAs are awarded to states, tribes, and political subdivisions to conduct preremedial activities, including preliminary assessments (PAs) and Site Investigations (SIs).
- Remedial CAs allow states, tribes, or political subdivisions to receive Superfund money for taking the lead in remedial planning, remedial design (RD), and RAs at specified sites within their jurisdiction. When a state or tribe takes the lead for an RA, the remedial CA documents the state or tribe's CERCLA Section 104 assurances, and an SSC is not required. When a political subdivision takes the lead for a remedial activity, a three-way SSC must be signed. This three-way state's **CERCLA** SCC documents the assurances.
- Removal CAs are awarded to states, tribes, or political subdivisions that lead a non-time-critical removal action (NTCR). Such actions are taken when a planning period of more than six months is available. Cost-share payment is not required (unless the facility was operated by the state or political subdivision, as described above), but EPA encourages cost-sharing for removal actions that cost more than \$2 million.
- Enforcement CA funds may be used by a state, tribe, or political subdivision to conduct potentially responsible party (PRP) searches, issue notice letters for negotiation activities, implement administrative and judicial enforcement actions, or oversee PRP response actions. Subpart O contains specific

- enforcement-related criteria that an applicant must meet to be eligible for an enforcement CA.
- Support agency cooperative agreements (SACAs) allow states, tribes, and political subdivisions that do not have lead-agency responsibility to actively participate in response activities at sites under their jurisdiction. SACAs may assist the state, tribe, or political subdivision in facilitating investigations, response selection, and implementation through the sharing of information and expertise. They may not be used, however, to document CERCLA assurances.

In addition to describing response CAs, 40 CFR Part 35 Subpart O also specifies financial, administrative, and other requirements with which a state, tribe, or political subdivision must comply in order to receive funds. A multi-site cooperative agreement, which has the same requirements as the other types of agreements, is a multi-purpose agreement that has been used to consolidate funding for various response activities at different sites.

#### **Core Program Cooperative Agreements**

Congress has expressed the intent to include CERCLA funding to states and tribes for certain basic, or core, activities that are not attributable to a specific site but are necessary to implement CERCLA response capabilities. The legislative history of CERCLA Section 104(d), as amended, demonstrates this intent to support the development of Superfund infrastructure. Through CPCAs, EPA offers states and tribes the opportunity to develop comprehensive, self-sufficient Superfund programs.

CPCAs have a single budget and scope of work designed to enhance state or tribal program activities. Approval of the budget request and scope of work is dependent on the continuing developmental needs of a state or tribal program, demonstrated progress in meeting previous core objectives, and funds availability. States are required to provide a 10 percent cost-share for Core Program awards.

The Core Program is intended to lay the groundwork for the implementation of an integrated EPA/state/tribal approach for meeting Superfund

goals. EPA typically budgets and annually distributes \$10 million to \$13 million among the 10 Regional offices for CPCAs. Regions also may provide additional funding if resources are available.

#### Fiscal Year 1995 Highlights

From FY81 through FY95, EPA has awarded nearly \$1.7 billion in CAs to states, tribes, and political subdivisions to assist them in participating in Superfund response activities. This total includes \$160 million awarded in FY95 through site-specific CAs. Remedial, removal, or enforcement CAs enable states, tribes, and political subdivisions to lead new or continuing Fund-financed remedial investigations and feasibility studies, RDs, and RAs at Superfund sites during the fiscal year.

#### State Highlights

EPA continued to build the state/EPA partnership through outreach initiatives with states. These initiatives included meetings with states on special topics of interest, such as soil screening levels, integrated assessments, and communications between EPA and state removal managers. EPA also provided states with assistance to enhance their Superfund programs by funding the participation of 60 representatives from 15 states in CERCLA training. The state representatives attended two sessions of state site managers' training that addressed in the basics of the federal Superfund program.

Under the administrative improvements initiative to enhance states' role in cleanup, the Agency continued developing the Superfund state deferral program. Under this program, EPA may defer consideration of certain sites for listing on the NPL, while interested states or tribes compel and oversee response actions conducted and funded by PRPs. In FY95, five to seven sites served as pilots for the deferral program in several states.

#### Tribal Highlights

In FY95, the Superfund program was actively involved in addressing hazardous waste problems on Native American lands and in assisting tribes to assume regulatory and program management

responsibilities. Tribes received funding, technical assistance, and training for Superfund implementation through SSCs, CAs, SACAs, CPCAs, and other agreements.

The development and enhancement of voluntary cleanup programs is being promoted by EPA in conjunction with states and tribes. Voluntary cleanup programs encourage private parties to undertake protective cleanups of contaminated sites. EPA is developing guidance outlining the circumstances under which it will agree to take no further action at sites involved in the program. Ten states have signed agreements with the EPA to encourage participation in voluntary investigation and cleanup of properties under state programs. In exchange, EPA agrees to take no further action against program participants except in limited circumstances.

# 7.2 Minority Firm Contracting

Section 105(f) of CERCLA requires EPA to consider minority contractors for procurement opportunities when awarding Superfund contracts, encourage the participation of such firms in the Superfund program, and report annually on the number and types of minority contractors receiving Superfund contracts. EPA's Office of Small and Disadvantaged Business Utilization (OSDBU) is responsible for ensuring that the Agency complies with Section 105(f) of CERCLA.

# 7.2.1 Minority Firm Contracting During Fiscal Year 1995

EPA contracts include direct procurements awarded by the Agency, and indirect procurements that result from Superfund financial assistance awards to states and other federal agencies (i.e., contracts and subcontracts resulting from CAs awarded to the states and from interagency agreements (IAGs) with other federal agencies). During FY95, contracts worth over \$147.4 million were awarded to disadvantaged businesses and minority contractors to perform Superfund work. This amount represents 10.1 percent of all Superfund contracts, which exceeds the 8 percent goal established by the Administrative Provisions of P.L. 103-389. As Exhibit 7.2-1 illustrates, EPA's CAs

Exhibit 7.2-1 Minority Contract Utilization During Fiscal Year 1995

Type of Activity	Total Dollars Obligated	Minority Contractor Participation <sup>1</sup>	Percentage of Total
Direct Procurement	\$1,144,840,000	\$121,150,650	10.58
Cooperative Agreements	84,061,710	511,134	.61
Interagency Agreements <sup>2</sup>	228,095,276	25,739,898	11.30
Total	\$1,456,996,986	\$147,401,682	10.12

<sup>2</sup>This amount represents the total dollars awarded in FY95 through interagency agreements.

Source: Office of Small and Disadvantaged Business Utilization.

with states resulted in contracts worth over \$511,000 to minority contractors. Other federal agencies awarded over \$25 million in contracts, subcontracts, and purchase orders to minority firms with funds transferred from the Superfund program under IAGs.

Through the Agency's direct procurements, minority business enterprises (MBEs) received \$121.2 million in Superfund contracts and This total was awarded through subcontracts. various contracting methods (i.e., Small Business Administration 8(a) awards and subcontracts).

Minority firms provide three types of services to the Superfund program: professional, field support, and construction. Exhibit 7.2-2 illustrates examples of tasks performed under each category.

## 7.2.2 Efforts to Identify Qualified Minority **Firms**

OSDBU conducted a number of outreach activities during FY95 to encourage qualified minority firms to seek contract and subcontract opportunities through the Superfund program. These activities included the following:

NAMC and OSDBU conducted six training sessions designed to help minority contractors become more successful in winning Superfund direct prime contract and subcontract awards. A total of 150 attendees participated in the training sessions. In addition, 40 registrants attended the marketing seminar and several hundred individuals visited the various booths at a trade fair for minority contractors held in conjunction with Congressional Black Caucus Week.

**Exhibit 7.2-2 Services Provided by Minority Contractors** 

Professional	Field Support	Construction
Health Assessments	Drilling/Well Installation	Site Cleanup
Community Relations	Laboratory Analysis	Excavations
Feasibility Studies		Waste Hauling & Drilling
Data Management Security		Security
Geophysical Surveys		Site Support
Remedial Investigations	·	Facilities
Expert Witness	•	•
Editing		
Air Quality Monitoring		

Source: Office of Small and Disadvantaged Business Utilization.

• EPA, in cooperation with the Colorado District SBA Office and the Genesis Environmental Team (GET), conducted several seminars to provide information on Superfund contracting and subcontracting opportunities in the Colorado region, and to increase minority participation in Superfund contracting. More than 200 minority and women businesses were represented at these sessions. Directories of qualified minority firms were distributed to encourage their utilization by prime contractors and government agencies.

# 7.2.3 Efforts to Encourage Other Federal Agencies and Departments to Use Minority Firms

OSDBU continues to work with other federal agencies to enhance participation of minority contractors in the Superfund program. Throughout the fiscal year, federal agencies held numerous conferences, workshops, and seminars to encourage minority business participation in the Superfund program.

IAGs between EPA and any agency or department that involve Superfund monies also contain provisions to ensure that agencies or departments are aware of the requirements of CERCLA Section 105(f). In addition, the special provisions require that agencies or departments undertaking Superfund work submit an annual report to EPA on minority contractor utilization.

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# Appendix A Status of Remedial Investigations, Feasibility Studies, and Remedial Actions at Sites on the National Priorities List in Progress on September 30, 1995

Appendix A satisfies the combined statutory requirements of CERCLA Sections 301(h)(1)(B) and (F). Accordingly, this appendix reports the status and estimated completion date of all remedial investigation/feasibility study (RI/FS) and remedial action (RA) Title I projects in progress at the end of FY95. This appendix also provides notice of RI/FSs and RAs that EPA presently believes will not meet its previously published schedule for completion, and includes new estimated dates of completion, as required by Section 301(h)(1)(C). These dates were previously published in Appendix A of Progress Toward Implementing Superfund: Fiscal Year 1994. In addition to meeting these statutory requirements, this appendix lists new remedial projects that were begun in FY94 and were in process at the end of FY95. Listed activities may include remedial projects at several operable units on a single site, as well as first and subsequent activities at a single operable unit.

Information in the appendix is organized under the following headings:

- RG-EPA region in which the site is located.
- ST State in which the site is located.
- Site Name Name of the site, as listed on the National Priorities List (NPL).
- Location Location of the site, as listed on the NPL.
- Operable Unit Operable unit at which the corresponding remedial activity is occurring; a single site may include more than one operable unit.
- Activity Type of project in progress on September 30, 1995.
- Lead The entity leading the activity, as follows:

**EP**: Fund-financed with EPA employees performing the project, not contractors;

**F**: Fund-financed and federal-lead by the Superfund remedial program;

FE: EPA enforcement program-lead;

FF: Federal facility-lead;

MR: Mixed funding; monies from both the Fund and potentially responsible parties (PRPs);

PRP: PRP-financed and conducted;

PS: PRP-financed work performed by the PRP under a state order (may include federal financing or federal oversight under an enforcement document);

S: State-lead and Fund-financed; and

SE: State enforcement-lead (may include federal financing).

Remaining terms used in the CERCLA Information System (CERCLIS) database, O (other), SN (state-lead and financed, no Fund money), and SR (state-ordered PRP response activities), are excluded from this status report because they do not include federal financing.

For some activities, the indicated lead is followed by an asterisk (\*), which indicates that funding for the activity was taken over by the indicated lead during FY95.

- Funding Start The date on which funds were allocated for the activity.
- Previous Completion Schedule For projects ongoing at the end of FY94 that continued into FY95, the quarter and fiscal year of the planned completion date for the activity, as of 9/30/95. This column is blank for projects that were begun in FY94.
- Present Completion Schedule The quarter and fiscal year of the planned completion of the activity, as of 9/30/95. This information was compiled from CERCLIS on 11/15/95.

An initial completion schedule is required to be put into CERCLIS when an activity is entered. Plans at this point are based on little site knowledge. As work continues, schedules are adjusted to reflect actual site conditions.

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING Start	COM	VIOUS PLETION EDULE	CO	ESENT MPLETION HEDULE
	GU	Anderson Air Force Base	YIGO	01 02 03	RI/FS RI/FS RI/FS	FF FF FF	03/30/93 06/29/93	3	2001 2000 1997	3	2001 2000
				04 05 06	RI/FS RI/FS RI/FS	FF FF FF	06/29/93 06/29/93 06/29/93 06/29/93	3 3 3 3	2000 2002 2003	3 3 3	1997 2000 2002 2003
1	СТ	Barkhamsted-New Hartford Landfill	Barkhamsted	01	RI/FS	PRP.	09/30/91	3	1995	4	1996
1	CT	Beacon Heights Landfill	Beacon Falls	02	RA	PRP	03/31/92	4	1995	1	1996
1	CT	Gallup's Quarry	Plainfield	. 01	RI/FS	PRP	09/07/93	2	1996	1	1997
1	СТ	Kellog-Deering Well Field	Norwalk	02 03	RA RI/FS	PRP EP	12/29/94 05/16/90	4	1999 ·	4	1996 1999
1	<b>CT</b>	New London Submarine Base	New London	02 03 04 05	RI/FS RI/FS RI/FS RI/FS	FF FF FF	09/27/94 09/27/94 09/27/94 09/27/94	4 3 4 4	1997 1996 1997 1998	4 4 4	1997 1997 1998 1998
1	CT	Raymark Industries, Inc.	Stratford	01 03	RA RI/FS	F F	07/27/95 09/20/93	3	1996	4	1996 1996
1	CT	Solvents Recovery Service of New England	Southington	03	RI/FS	F	08/12/88	2	1996	4	1996
1	MA	Atlas Tack Corp.	Fairhaven	01	RI/FS	F	09/18/89	3.	1996	1	1997
.1	MA	Baird & McGuire	Holbrook	02 03 04	RA RA RA	F F	06/26/90 09/30/91 04/20/95	· · 4	1997 1995	3 4 4	1997 1995 1995
1.	MA	Charles-George Reclamation Trust	Tyngsborough	03	RA	F	09/28/90	4	1995	2	1998

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	CON	SENT PLETION EDULE
1	MA	Fort Devens	Fort Devens	02 03 04 05 06 07	RI/FS RI/FS RA RI/FS RI/FS RI/FS	FF FF FF FF	05/13/91 08/31/92 08/11/95 08/31/92 05/24/94 05/24/94	3 1995 4 1995 1 1996 1 1997 2 1996	4 3 4 3 4 3	1996 1996 1998 1996 1996 1997
1	MA	Fort Devens - Sudbury Training . Annex	Fort Devens	03 04 05	RI/FS RI/FS RI/FS	FF FF FF	05/13/91 06/15/93 06/15/93	3 1995 4 1996 2 1997	. 4 4 2	1997 1996 1997
1	MA .	Groveland Wells	Groveland	02	RA	F.	11/02/92		1	1998
1	MA:	Hocomonco Pond	Westborough	02	RA	PRP	06/02/93	1 1997	. 1	1997
1	MA	Industri-Plex (Mark Philips Trust)	Woburn	01 02	RA RI	PRP PRP	05/18/92 12/08/89	3 1996	3	1997 1998
1	MA	Iron Horse Park	Billerica	01 03	RA RI/FS	PRP F	07/15/91 01/31/90	4 1996 2 1996	4 2	1998 1997
1	MA	Materials Technology Laboratory (USARMY)	Watertown	01	RI/FS	FF	05/05/95		4 -	1996
1	MA	New Bedford Site	New Bedford	01 03	FS RI/FS	F F	02/15/85 09/28/93	1 1996 4 1998	1	1996 1998
1	MA	Nyanza Chemical Waste Dump	Ashland	04	RI/FS	F	02/18/93	3 1997	3	1997
- 1	MA	Otis Air National Guard Base/Camp Edwards	Falmouth	02 03 05 06 07 08 09	RA RI/FS RI/FS RI/FS RA RI/FS RI/FS RI/FS	FF FF FF FF FF FF	10/15/92 07/17/91 07/17/91 07/17/91 09/21/93 07/17/91 02/01/93 03/02/93	1 1995 1 1996 4 1996 4 1996 1 1996 2 1997 1 1996 3 1996	1 1 3 1 2 2 3 4	1996 1997 1997 1997 1996 1998 1998

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	COM	VIOUS PLETION EDULE	CON	SENT IPLETION IEDULE
1	MA	Re-Solve, Inc.	Dartmouth	02	RA	MR	05/05/93	2	1995	4	1995
1	MA	Shpack Landfill	Norton/Attleboro	01	RI/FS	PRP	09/24/90	2	1996	3	1997
1	MA	W.R. Grace & Co., Inc.	Acton	01	RA	PRP	09/03/93	4	1996	4	1996
1	MA	Wells G&H	Woburn	01	RA	PRP	09/30/92		•	4	2000
				02 03	RI/FS RI/FS	PRP F	09/28/90 09/28/90	2	1997 1997	2	1998 1998
1	ME	Brunswick Naval Air Station	Brunswick	01	RA	FF	12/06/94		<del></del>	1	1997
		•		05 07	RI/FS RI/FS	FF FF	06/22/90 06/22/90		1005	2	1996
		•	•	U!	K1/12	. FC	00/22/90	2	1995	4	1996
1	ME	Loring Air Force Base	Limestone	03	RI/FS	FF	05/09/91	2	1997	2	1997
				04	RI/FS	FF	05/09/91	3	1996	4	1996
				05	RI/FS	FF	05/09/91	3	1996	4	.1996
		,		07	RA	FF	02/10/95			.1	1996
		•		08	RI/FS	EF	01/30/91	4	1996	4	1996
		•		09	RI/FS	FF	01/30/91	4	1996	2	1997
				10	RI/FS	FF	01/30/91	4	1996	2	1997
				14	RI/FS	FF	01/13/95	7	1770	2	1996
		•		15	RI/FS	FF	03/16/95			2	1996
					,	••				-	1770
1.	·ME	Saco Municipal Landfill	Saco .	01 .	RI/FS	PRP	09/26/95			4	1998
1	ME	Union Chemical Co., Inc.	South Hope	01	RA	PRP	04/05/95	٠.		2	1997
1	ME	Winthrop Landfill	Winthrop	03	RA	PRP	04/28/94	4	1997	4	1997
1	NH	Fletcher's Paint Works	Milford	01	RI/FS	F	07/29/90	4	1995	3	1996
-1	NH	New Hampshire Plating Co.	Merrimack	01	RI/FS	F	07/14/92	1	1996	4	1996
1	NH	Pease Air Force Base	Portsmouth/Newington	01	RA	ËF	09/20/94	4	1996	4	1996
1	NH	Tinkham Garage	Londonderry	01 02	RA RA	PRP . PRP	02/07/94 02/07/94	2 1	1996 1999	2 .	1996 1998

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<u>RG</u>	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	CO	EVIOUS MPLETION HEDULE	CO	SENT IPLETION IEDULE
1	RI	Central Landfill	Johnston	02	RI/FS	PRP	08/25/94			4	1996
1	RI	Davis (GSR) Landfill	Smithfield	01	RI/FS	F	09/27/90	2	1996	2.	1997
1	RI	Davis Liquid Waste	Smithfield	01	RA	F	04/27/88	2	1996	4	1996
1	RI .	Davisville Naval Construction Batt Center	North Kingstown	01 02 04 05	RI/FS RA RI/FS RI/FS	FF FF FF	03/23/92 01/04/95 03/23/92 03/23/92	1 4 4	1996 1995 1997	4 2 4 4	1996 1996 1997 1997
1.	RI	Landfill & Resource Recovery, Inc. (L&RR)	North Smithfield	01	RA .	PRP	06/23/94	. 1	1996	. 1	1997
1	RI	Newport Naval Education/Training Center	Newport	01 02 03 04	RA RA RI/FS RI/FS	FF FF FF	12/27/94 12/27/93 03/23/92 03/23/92	4 1 4	1997 1996 1995	1 4 1 4	1997 1997 1999 1997
1	RI	Rose Hill Regional Landfill	South Kingstown	01	RI/FS	F	09/30/90	4	1995	4	1996
1	VT	Bennington Municipal Sanitary Landfill	Bennington	01	RI/FS	PRP	06/28/91	1	1996	4	1996
1	VT	Burgess Brothers Landfill	.Woodford	01	RI/FS	PRP	08/27/91	2	1996	4	1998
1	VT	Pine Street Canal	Burlington	01	RI/FS	PRP	07/22/94			3	1996
2	NJ	American Cyanamid Co.	Bound Brook	04 05	RI/FS RI/FS	SE SE	05/28/88 05/28/88	4	1996 1997	1 1	2000 2001
2	ИЈ	Asbestos Dump	Millington	02 03	RA RI/FS	F FF	08/31/93 01/24/91	4 2	1995 1996	4 2	1995 1996
2	NJ	Bridgeport Rental & Oil Services	Bridgeport	,01	RA	F	04/19/88	1	1996	3	1996

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				OPER-		•			EVIOUS		ESENT
RG	ST	SITE NAME	LOCATION	ABLE Unit	ACTIVITY	LEAD	FUNDING START		APLETION HEDULE		MPLETION HEDULE
.2	NJ	Burnt Fly Bog	Marlboro Township	02 03	RA RI/FS	S S .	09/29/94 09/30/88	4	1996	2	1997 1998
. 2	NJ	Caldwell Trucking Co.	Fairfield	01	RA	PRP	05/12/93	1	1996	1	1996
2	NJ	Chemical Insecticide Corp.	Edison Township	02 03 03	RI/FS RA RA	F F	03/29/85 06/16/95 09/13/95	4	1994	4 1 1	1997 1997 . 1997
2	NJ	Chemical Leaman Tank Lines, Inc.	Bridgeport	02	RI/FS	F	07/15/85	4	1993	1	1997
2	·NJ	Chemsol, Inc.	Piscataway	01	RI/FS	F	09/28/90	1	1996	1	1997
2	NJ	Ciba-Geigy Corp. (TOMS RIVER CHEMICAL)	Toms River	02	RI/FS	F	07/05/89	2	1997	- 3	1998
2	NJ	Combe Fill South Landfill	Chester Township	01	RA	s	09/28/90	3	1996	3	1996
2	NJ	Cosden Chemical Coatings Corp.	Beverly	01	RA	F	09/29/94	1	1996	4	1996
2	NJ	Curcio Scrap Metal, Inc.	Saddle Brook Township	02	RI/FS	PRP	04/21/95	1	1995	1	1997
2	ŊĴ	D'Imperio Property	Hamilton Township	01	RA	PRP	05/10/94	4	1997	4	1997
2	NJ	Diamond Alkali Co.	Newark	02	RI/FS	PRP	04/20/94	1	1997	1	1997
2	NJ	Dover Municipal Well 4	Dover Township	02	RI/FS	F	07/06/93	2	1996	2	1997
2	NJ	Ewan Property	Shamong Township	01	RA	PRP	08/16/94	4	1995	1	1996
2	NJ	Fair Lawn Well Field	Fair Lawn	01	RI/FS	F	09/30/92	2	1996	2	1996
2	NJ	Federal Aviation Administration Technical Center	Atlantic City	01 07 08 09 10	RA RI/FS RI/FS RI/FS RI/FS	FF FF FF FF	08/19/92 06/01/87 06/01/87 06/01/87 06/01/87	3 4 1 1	1995 1995 1996 1996 1996	3 4 4 1 1	1995 1996 1996 1996 1996

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	e			OPER- ABLE			FUNDING	PREVIOUS COMPLETION			SENT PLETION
RG	ST	SITE NAME	LOCATION	UNIT	ACTIVITY	LEAD	START		EDULE		EDULE
2	NJ	Florence Land Recontouring Landfill	Florence Township	01	RA	· \$	09/29/89	4	1995	1	1997
2	ИJ	Fort Dix (Landfill Site)	Pemberton Township	01 02 03	RA . RI/FS RI/FS	FF FF	08/06/92 06/19/91 10/01/92	1 1 1	1996 1996 1996	1 1 1	1996 1997 1997
2	NJ	Franklin Burn	Franklin Township	01	RI/FS	F	09/30/92			2	1997
2	NJ	.Glen Ridge Radium Site	Glen Ridge	01 02 03	RA RI/FS RA	F F	09/15/89 03/30/90 09/30/92	4 2 4	1998 1995 1998	4 2 4	1998 1995 1998
2	LN	Goose Farm	Plumstead Township	01	RA	PRP	08/27/92	4	1999	2	1996
.2	NJ.	Hercules, Inc. (Gibbstown Plant)	Gibbstown	02	RI/FS	PS	07/02/86	1	1996	4	1996
2	NJ	Higgins Disposal	Kingston	01	RI/FS	F	05/17/90	1	1996	4	1996
2	ИЛ	Higgins Farm	Franklin Township	01 01	RA RA	F F	03/17/95 02/06/95		iv .	1	1997 1996
2	ИЛ	Hopkins Farm	Plumstead Township	- 01	RI/FS	PS	02/03/87	3	1994	3	1996
2	NJ	Imperial Oil Co., Inc./Champion Chemicals	Morganville	01 03	RA FS	s s	09/29/94 09/28/84	1 3	1996 1995	1	1998 1995
2	NJ	Industrial Latex Corp.	Wallington Borough	01 02	RA RI/FS	F F	04/28/95 09/30/93	4	1996	1	1997 1996
2	NJ	Kauffman & Minteer, Inc.	Jobstown	01	RI/FS	F	04/11/89	2	1995	. 1	1996
2	NJ	Kin-Buc Landfill	Edison Township	01 02	RA RA	PRP PRP	06/23/93 06/10/94	2	1996 1996	2	1996 1996

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<u>RG</u>	ST	SITE NAME	LOCATION	OPER- ABLE Unit	ACTIVITY	LEAD	FUNDING START	CO	EVIOUS MPLETION HEDULE	CON	ESENT MPLETION HEDULE
2	NJ	King of Prussia	Winslow Township	03	RA	PRP	07/22/94	1	1995	1	1995
2	NJ	Lang Property	Pemberton Township	01	RA	F	09/30/92	4	1996	4	1997
2	NJ	Lipari Landfill	Pitman	02 03	RA RA	F PRP	09/30/88 12/29/93	4	1999	4	1999 1997
2	NJ	Maywood Chemical Co.	Maywood/Rochelle Park	01 02	RI/FS RI/FS	PRP FF	09/21/87 07/21/90	3 3	1995 1995	4	1996 1996
. 2	NJ	Metaltec/Aerosystems	Franklin Borough	01	RA	F	03/29/91	4	1996	4	1996
2	NJ	Monitor Devices/Intercircuits, Inc.	Wall Township	01	RI/FS	F	03/12/92		•	4	1997
2	NJ .	Montclair/West Orange Radium Site	Montclair/West Orange	01 02 03	RA RI/FS RA	F F	09/15/89 03/30/90 09/30/92	4 2 4	1998 1995 1998	4 2 4	1998 1995 1998
2	NJ	Nascolite Corp.	Millville	01	RA	PRP	06/15/95	•		1	1997
	NJ:	Naval Air Engineering Center	Lakehurst	18 19 20 21 23	RI/FS RI/FS RI/FS RI/FS RA	FF FF FF FF	09/25/89 09/25/89 09/25/89 09/25/89 08/30/94	2 2 3 3	1996 1996 1997 1997	2 2 3 3	1996 1996 1997 1997 1996
2	NJ	Naval Weapons Station	Colts Neck	01	RI/FS	FF	09/27/90	1	1996	3	1997
2	NJ	Picatinny Arsenal	Rockaway Township	02 03 04	RI/FS RI/FS RI/FS	FF FF	10/01/92 10/01/92 05/28/93	3 1 1	1997 1996 1998	4 4 4	1998 1997 2000
2	NJ	Renora, Inc.	Edison Township	02	RA	PRP	08/25/95			1	1996
2	NJ <sub>.</sub>	Rockaway Borough Well Field	Rockaway Township	03	RI/FS	F	09/30/92	1	1996	1	1997

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
2	NJ	Roebling Steel Co.	Florence	04	RI/FS	F	09/29/92	3	1995	1	1996
2	NJ	Sayreville Landfill .	Sayreville ·	02	RI/FS	PS	11/26/91	1	1995	3	1996
2	NJ	Scientific Chemical Processing	Carlstadt	· 02	RI/FS	PRP	12/19/88	1	1996	1	1996
2	NJ	Sheild Alloy Corp.	Newfield Borough	02	RI/FS	PS	10/05/88	1	1996	1	1996
2	NJ	Swope Oil & Chemical Co.	Pennsauken	01	RA	PRP	09/07/88	2	1996	2	1997
2	NJ	Syncon Resins	South Kearny	01	RA	·s	05/23/89	2	1994	2	1994
2	NJ	U.S. Radium Corp.	Orange	<u>0</u> 2	RI	F	09/01/89			3	1993
2	NJ	WR Grace & Co. Inc./Wayne Interim Storage Site	Wayne Township	01	RI/FS	FF	07/21/90	3	1995	4.	1996
2	NJ	Williams Property	Swainton	01	RA	s	06/30/93	2	1995	2	1995
2	NY	American Thermostat Co.	South Cairo	02 02	RA RA	F F	08/07/92 06/30/93	2 4	1995 1996	1	1997 1999
2	NY	Applied Environmental Services	Glenwood Landing	01	RA	PS	03/28/94	1	- 1998	1	1998
2	NY	Batavia Landfill	Batavia	02	RA	PRP	04/20/95			1	1996
2	NY	Brewster Well Field	Putnam County	01	RA	F	09/23/87	3	1995	1 -	1996
2	NY	Brookhaven National Laboratory (USDOE)	Upton	01 02 03 04 05 06	RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF FF	05/11/93 12/14/94 06/30/94 11/19/91 10/29/93 06/02/94	1 3 1 4 2	1997 1998 1996 1997 1997	1 4 3 3 4 2	1997 1998 1998 1996 1997 1997
2	NY	Carrol & Dubies Sewage Disposal	Port Jervis	02	RI/FS	PRP	07/31/92	1.	1996	3	1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
2	NY	Circuitron Corp.	East Farmingdale	01 . 03 04	RA RA RA	F F F	09/30/94 09/30/94 09/30/94	4	1995 1996	4 4 2	1995 1996 1998
2	NY	Claremont Polychemical	Old Bethpage	01	RA	F.	09/30/93	4	1996	1	1997
2	NY	Colesville Municipal Landfill	Town of Colesville	01	RA	PS	07/14/94	3	1996	1	1997
2	NY	Conklin Dumps	Conklin	01	RA	PS	07/06/93	1	1996	1	1996
. 2	NY	Endicott Village Well Field	Village of Endicott	02 03	RA RA	PRP PRP	08/16/95 03/06/95			2	1997 1996
2	NY	FMC Corp. (Dublin Road Landfill)	Town of Shelby	01	RA	P <b>S</b>	05/02/94	4	1996	4	1996
2	NY	Facet Enterprises, Inc.	Elmira	01	RI/FS	PRP	05/22/86	3	1992	3	1992
2	NY	Forest Glen Mobile Home Subdivision	Niagara Falls	02	RI/FS	F	09/30/92	2	1996	4	1996
2	NY	Fulton Terminals	Fulton	01 02	RA RA	PRP PRP	09/29/94 03/31/95	2	1999	<b>3</b> 4	1996 1997
2	NY	General Motors (Central Foundry Division)	Massena	01 02	RA RA	PRP PRP	06/21/95 06/14/95			3 1	1999 1996
2	NY	Genzale Plating Co.	Franklin Square	01	RA	F	09/30/94	3	1996	2	1997
2 .	NY	Griffiss Air Force Base	Rome	01 02 03 04 05 06 07	RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF FF	03/29/90 03/29/90 03/29/90 03/29/90 03/29/90 03/29/90 03/29/90	1 2 2 2 2 2 2 2 2	1996 1996 1996 1996 1996 1996	1 2 1 1 1 1 2	1997 1996 1997 1997 1997 1997
2	NY	Hooker (Hyde Park)	Niagara Falls	01 .	RA	PRP	08/15/87	1	1996	1	1997

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	COM	VIOUS PLETION EDULE	COM	SENT PLETION EDULE
2	NY	Hooker (South Area)	Niagara-Falls	01 01 01	RA RA RA	PRP PRP PRP	11/02/90 12/09/93 11/02/90	4 2 4	1996 1997 1996	1 4 1	1998 1997 1999
2	NY	Hooker Chemical/Ruco Polymer Corp.	Hicksville	03	RI/FS	PRP	09/23/94			. 4	1996
2	NY.	Hudson River PCBs	Hudson River	02	RI/FS	F	07/25/90	1	1996	1	1997
2	NY	Islip Municipal Sanitary Landfill	Islip	01	RA	PS	03/31/95			2	1999
2	NY	Johnstown City Landfill	Town of Johnstown	01	- RA	PS	06/23/95			4	1998
2	NY	Jones Chemicals, Inc.	Caledonia	01	RI/FS	PRP	03/29/91	1	1996	1	1997
2	NY	Jones Sanitation	Hyde Park	01	RI/FS	PRP	03/26/91	4 ·	1995	4	1995
2	NY ·	Kentucky Avenue Well Field	Horseheads	03	RI/FS	PRP	08/08/91	2	1995	2	1996
2	NY	Li Tungsten Corp.	Glen Cove	01	RI/FS	F	08/26/92	3	1996	3	1997
2	NY	Liberty Industrial Finishing	Farmingdale	01	RI/FS	F	09/28/90	3	1995	1	1996
2	NY	Love Canal	Niagara Falls	07 08	RA RA	\$ \$	02/09/87 06/26/87	3 1	1998 1996	3 1	1998 1996
2	NY	Malta Rocket Fuel Area	Malta	01	RI/FS	PRP	11/10/89	3	1995	1	1996
. 2	NY	Mattiace Petrochemical Co., Inc.	Glen Cove	04 05 06	RA RA RA	F F F	09/30/93 06/30/93 06/30/93	1 4 4	1997 1995 1995	3 3 1	1998 1996 1997
2	NY	North Sea Municipal Landfill	North Sea	02	RI/FS	PRP	07/27/89	4	1992	4	1992
2	NY	Old Bethpage Landfill	Oyster Bay	01.	RA	PS	11/13/90	1	1993	1	1993

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RG ST	SITE NAME		LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING Start	CO	EVIOUS MPLETION MEDULE	CO	ESENT MPLETION HEDULE
2	NY	Onondaga Lake	Syracuse	01	RI/FS	PS	05/10/93	4	1998	. 4	1998
2	NY	Plattsburg Air Force Base	Plattsburgh	05 06 07	RI/FS RI/FS RI/FS	FF FF FF	04/23/91 06/04/92 10/01/92	3 1 1	1995 1996 1996	1 3 1	1997 1997 1997
2	NY	Port Washington Landfill	Port Washington	01	RA	PRP	03/31/95		:	1	1997
2	NY	Preferred Plating Corp.	Farmingdale	01	RA	F	01/31/92	2	2007	2	2007
. 5	NY	Ramapo Landfill	Ramapo	01	RA	PS	06/20/94	2	1996	3	1996
2	NY	Richardson Hill Road Landfll/Pond	Sidney Center	01	RI/FS	PRP	07/22/87	2	1996	1	1997
2	NY	Rosen Brothers Scrap Yard/Dump	Cortland	01	RI/FS	PRP	01/04/90	3	1995	. 4	1995
. 2	NY	Sarney Farm	Amenia	01	RA	F	03/31/92	2	1995	2	1995
2	NY	Seneca Army Depot	Romulus	01 02 03 04 05 06	RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF FF	03/19/90 04/29/91 03/31/95 03/30/95 06/19/95 09/20/95	3	1995 1995	3 2 4 1	1996 1996 1997 1997 1998 2000
2	NY	Sinclair Refinery	Wellsville	02	RA	PRP	03/03/95			1	1996
2	NY	Syosset Landfill	Oyster Bay	02	RI/FS	PRP	11/15/90	4	1995	1	1996
2.	NY	Tri-Cities Barrel Co., Inc.	Port Crane	01	RI/FS	PRP	05/14/92			1.	1997
2	NY	Vestal Water Supply Well 1-1	Vestal	02	RA	F	09/30/94	1	1997	3	1997
2	NY	Volney Municipal Landfill	Town of Volney	02	R1/FS	PRP	09/28/90			4	2000
2	NY	Warwick Landfill	Warwick	01	RA ·	PRP	08/25/95			2	1997

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RG	<u>st</u>	SITE NAME `	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING Start	PREVIOUS . COMPLETION SCHEDULE	CO	ESENT MPLETION HEDULE
2	NY	York Oil Co.	Warwick	01 . 02	RA RI/FS	PRP PRP	10/17/94 05/21/92	,	1 1	1997 1997
2	PR	Barceloneta Landfill	Florida Afuera	01	R1/FS	PRP	09/28/90		1	1996
2	PR	Fibers Public Supply Wells	Jobos	02	RA	PRP	09/28/95		. 2	1997
2	PR	Naval Security Group Activity	Sabana Seca	01 02	RI/FS RI/FS	FF FF	03/19/92 10/01/92	1 1996 1 1996	1 3	1997 1996
2	PR	Upjohn Facility .	Barceloneta	01 01	RA RA	PRP PRP	04/19/89 02/11/92	1 1996 3 1994	1 3	1996 1994
2	PR	Vega Alta Public Supply Wells	Vega Alta	01 02	RA RI/FS	PRP PRP	09/18/92 10/23/90 <sub>,</sub>	4 1994	4 4	1994 1995
2	VI	Island Chemical Corp/V.I. Chemical Corp	Tutu	01	RI/FS	PRP	09/29/94	1 1996	4	1996
2	VI	Tutu Wellfield	Tutu	· 01	RI/FS	PRP	02/19/92	4 1995	4.	1995
3	DE	Delaware City PVC Plant (Stauffer Chemical Co.)	Delaware City	03	RI/FS	PRP	06/30/95		1	1997
3	ĐE	Delaware Sand & Gravel-Llangollen/A rmy Creek Landfill)	New Castle County	03 04	RA RA	PRP PRP	07/28/93 06/29/95	3 1996	. <b>3</b>	1997 1996
3	DE	Dover Air Force Base	Dover	02 06 07 08 09	RA RI/FS RI/FS RI/FS RI/FS	FF FF FF FF	08/09/94 09/20/93 09/20/93 09/20/93	4 1996 2 1997 2 1997 2 1997 2 1997	4 2 2 2 2	1996 1997 1997 1997 1997
3	DE	E.I. Du Pont de Nemours & Co.(Newport Pigment plant LdF	Nеwport	01	RA	PRP	09/29/95		1	1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	CO	EVIOUS MPLETION HEDULE	CC	ESENT MPLETION HEDULE
3	DE	Halby Chemical Co.	New Castle	02	RI/FS	F	12/20/91	4	1995	3	1996
3	DE	Koppers Co., Inc. (Newport Plant)	Newport	01	RI/FS	PRP	09/26/91	3	1997	1.	1998
	DE	New Castle Spill (once listed as TRIS Spill)	New Castle County	01	RA	PRP	09/29/92	1	1999 、	1	1999
3	DE	Tyler Refrigeration Pit	Smyrna	. 01	RI/FS	PRP	03/29/91	2	1997	1	1997
	MD	Aberdeen Proving Ground (Edgewood Area)	Edgewood	02 06 07 08 09 10	RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF FF	03/27/90 03/27/90 03/27/90 03/27/90 03/27/90 03/27/90 12/05/90	1 2 2 4 1 1 1	1996 1996 1995 1996 1996 1996	4 4 2 4 3 3 4	1996 1995 1996 1996 1996 1996
3	MD	Aberdeen Proving Grounds (Michaelsville Landfill)	Aberdeen	02 03 05 06	RI/FS RI/FS RI/FS RI/FS	FF FF FF	03/27/90 03/27/90 03/27/90 08/30/91	1 2 4	1996	1 1 4 3	1996 1997 1995 1996
3	MD	Kane & Lombard Street Drums	Baltimore	. 02	RI/FS	PRP	07/16/93	•	1773	2	1997
3	MD	Limestone Road	Cumberland	01 02	RA RI/FS	PRP PRP	03/29/94 02/28/90	2	1995	4 2	1995 1996
3	MD	Sand, Gravel & Stone	Elkton	03	RA	PRP	05/18/95			2	1997
3	PA	AMP, Inc. (Glen Rock Facility)	Glen Rock	01	RI/FS	PRP	03/01/89	1	1996	1	1996
3	PA	Austin Avenue Radiation Site	Deleware County	01	RA ·	F	12/13/94		•	1	1999
3	PA	Bally Ground Water Contamination	Bally Borough	01	RA	PRP	02/17/95			4	1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
3	PA	Bendix Flight Systems Division	Bridgewater Township	02 04 05	RA RA RA	PRP PRP PRP	06/15/92 03/10/94 06/23/94	1 3 2	1995 1996 1996	1 3 2	1996 1996 1996
3	PA	Berkley Products Co. Dump	Denver	01	RI/FS	F	03/12/90	2	1995	1	1996 ·
3	PA	Berks Landfill	Spring Township	-01	RI/FS	PRP	06/26/91	2	1995	2	1996
3	PA	Blosenski Landfill	West Caln Township	04	RA	PRP	04/29/95			<b>1</b> 1	1996
3	PA	Boarhead Farms	Bridgeton Township	01	RI/FS	F	12/05/89	2	1995	1	1997
3	· PA	Brodhead Creek	Stroudsburg	01	RA	PRP	05/04/94	3	1995	2	1996
3	PA	Butler Mine Tunnel	Pittston	01	R1/FS	PRP	03/30/87	2	1995	4	1995
3	PA	Craig Farm Drum	Parker	01	RA	PRP	09/27/93	3	1995	4	1995
3	PA	Crater Resources/Keystone Coke/Alan Wood	Upper Merion Township	01	RI/FS	PRP	09/07/94	2	1996	3	1997
3	PA	Crossley Farm	Hereford Township	01	RI/FS	F	09/27/94	1	1996	1	1997
3	PA	CryoChem, Inc.	Worman ,	02	RA	F	09/30/93	1	1996	3 ·	1997
3	PA	Delta Quarries & Disposal, Inc. (Stotler Landfill)	Antis/Logan Townships	01	RA	PRP	06/07/95			3	1998
3	PA	Dorney Road Landfill	Upper Macungie Township	01	RA	PRP	06/14/95			4	1997
3	. PA	Drake Chemical	Lock Haven	03	RA	F	09/30/91			3	1998
3	PA	Dublin TCE Site	Dublin Borough	02	RI/FS	PRP	08/15/91	4	1995	4	1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PRÉVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
3	PA	East Mount Zion	Springettsbury Township	01	RA	F	09/30/94	4	1997	4	1997
3	PA	Elizabethtown Landfill	Elizabethtown	01	RI/FS	PRP	09/28/90	1	1995	1	1996
3	PA	Fischer & Porter Co.	Warminster	02	RI/FS	F	02/20/92	3	1995 .	1	1997
3	PA	Havertown PCP .	Haverford	03	RI/FS	·F	08/15/91	4	1995	1	1997
3	PA	Hellertown Manufacturing Co.	Hellertown	02	RA	F	09/22/93	2	1997	2	1997
3	PA	Jack's Creek/Sitkin Smelting and Refining Inc.	Maitland	01	RI/FS	F	08/28/90	2	1995	1	1996
3	PA	Keystone Sanitation Landfill	Union Township	. 02	RI/FS	F,	04/21/94	1	1996	1	1997
3	PA	Letterkenny Army Depot (Property Disposal Office Area)	Franklin County	02	RI/FS	FF	02/03/89	2	1995	4	1995
3	PA	Letterkenny Army Depot (Southeast Area)	Chambersburg	01 02 03	RA RI/FS RI/FS	FF FF FF	09/08/93 02/03/89 02/03/89	4 2 2	1994 1995 1996	2 4 2	1995 1995 1996
3	PA	Lord-Shope Landfill	Girard Township	01	RA	PRP	07/20/94	1	1996	3	1996
3	PA	MW Manufacturing	Valley Township	04	RA	PRP	11/07/94			3	1996
3	PA	Malvern TCE	Malvern	01	RI/FS	F	03/16/94			4	1996
3	PA	McAdoo Associates	McAdoo Borough	02	RA	F	08/02/94	1	1995	1	1996
<b>3</b> .	PA	Metal Banks	Philadelphia	01	RI/FS	PRP	05/29/91	2	1995	3	1995
3	PA	Metropolitan Mirror and Glass	Frackville	01	RI/FS	F	09/19/94	2	1996	4	1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD_	FUNDING START	COM	VIOUS PLETION EDULE	CON	SENT IPLETION IEDULE
3	PA	Middletown Air Field	Middletown	02 03	RA RI/FS	PRP ·	04/25/94 02/28/94	1 - 3	1997 1996	1	1997 1997
3	PA	Mill Creek Dump	Erie .	01 02	RA RA	F PRP	02/01/92 05/04/92	1 4	1995 1995	3 1	2005 1997
3	PA	Modern Sanitation Landfill	Lower Windsor Township	01	RA	PRP	09/28/95	•		3	1998
3	PA	Moyers Landfill	Eagleville	01 ·	RA	F	09/29/88	1	. 1996	4	1996
3	PA	Naval Air Development Center (8 waste centers)	Warminster Township	01 02 05	RA RA RI/FS	FF FF	01/15/95 06/14/94 06/27/94	3 4	1995 1995	1 3 2	1996 1995 1996
3	PA	North Penn-Area 12	Township	01	RI/FS	F	12/23/91			3	1996
3	PA	North Penn-Area 6 (J.W. Rex/Allied Paint/Keystone hydra	Lansdale	02 03	RI/FS RI/FS	PRP F	05/11/95 09/28/93	3	1996	3 3	1997 1997
3	PA	Ohio River Park	Neville Island	01	RI/FS	PRP	10/16/91	3	1995	1	1996
3	PA	Old City of York Landfill	Seven Valleys	01	RA	PRP -	05/08/95			1	1997
. 3	PA	Osborne Landfill	Grove City	01 02	RA RI/FS	PRP PRP	01/24/95 10/31/92	4	1995	1 2	1998 1996
3	PA	Palmerton Zinc Pile	Palmerton .	01 04	RA RI/FS	PRP F	07/31/88 08/12/88	4 3	1999 1997	4 3	1999 1997
3	PA	Publicker Industries Inc.	Philadelphia	02	RI/FS	F	09/21/89	1	1995	1	1995
3	PA	Revere Chemical Co.	Nockamixon Township	02	RI/FS	PRP.	12/16/88	2	1995	1	1996
3	PA	River Road Landfill (Waste Management, Inc.)	Hermitage	01	RI/FS	PRP	05/05/90	3	1995	1.	1996

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RG	st_	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	CO	EVIOUS MPLETION HEDULE	CO	ESENT MPLETION HEDULE
3	PA	Rodale Manufacturing Co., Inc.	Emmaus Borough	01	RI/FS	PRP	09/22/92	2	1996	1	1997
3	PA	Saegerton Industrial Area	Saegertown	02	RA	PRP	08/08/95		•	4	1996
3	PA	Strasburg Landfill	Newlin Township	04	RI/FS	F	01/14/92	3	1997	3 .	1997
3	PA	Tobyhanna Army Depot	Toby Hanna	01 02 03 04 05 06 08	RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF	09/27/90 09/27/90 09/27/90 06/22/93 06/22/93	4 3 4	1994 1996 1995	2 1 2 4 2 3	1996 1997 1996 1996 1996
3	PA	Tysons Dump	Upper Merion Township	01 01	FS RA	FF F PRP	06/22/93 07/15/93 06/03/88	4	1994 1995	1 1 1	1997 1996 1997
. 3	PA	Walsh Landfill	Honeybrook Township	04	RI/FS	F	05/01/90	1	1997	1	1997
3	PA	Westinghouse Elevator Co. (Sharon Plant)	Sharon	01	RI/FS	PS	09/20/88	1	1996	2	1996
3	VA	Avtex Fibers, Inc.	Front Royal	04 06 07 08	RA RI/FS RI/FS RI/FS	F PRP PRP PRP	07/22/91 09/27/90 03/30/93 06/19/95	1 1 1	1998 1998 1997	1 1 1 2	1998 1998 1998 1996
3	VA	C&R Battery Co., Inc.	Chesterfield County	- 01	RA	PRP	04/28/92	1	1995	2	1996
3	VA	Culpeper Wood Preservers,	Culpeper	01	RI/FS	PRP	06/16/93	•	-	1	1997
3	VA	Defense General Supply Center	Chesterfield County	02 04 06 07 08 09	RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF	09/21/90 09/21/90 10/11/91 10/11/91 10/11/91 12/31/94	4 3 1 3 1	1994 1996 1996 1996 1996	4 3 1 3 1	1994 1996 1996 1996 1996 1997

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	CO	EVIOUS APLETION HEDULE	CO	ESENT IPLETION IEDULE
3	VA	Dixie Caverns County Landfill	Salem	01	RA	PRP	08/15/94	4	1995	1	1996
3	VA	Greenwood Chemical Co.	Newton	01	RA	F	09/29/94	1	1996	1	1997
3	VA	L.A. Clarke & Son	Spotsylvania County	02 03	RA RA	PRP PRP	08/07/90 12/14/92	1	1995 1997	2	1996 1998
3	VA	Langley Air Force Base/NASA Langley Cntr	Rampton	03	RI/FS	FF	12/16/93	1	1997	1	1998
3	VA	Naval Surface Warfare - Dahlgren	Dahlgren	01 02 03 04	RI/FS RI/FS RI/FS RI/FS	FF FF FF	12/13/93 12/13/93 12/13/93 12/13/93	4 4 4 4	1996 1996 1996 1996	4 4 4 3	1996 1996 1997 1997
<b>3</b>	VA	Naval Weapons Station - Yorktown	Yorktown	02 · 03 04	RI/FS RI/FS RI/FS	FF FF FF	07/25/94 . 07/14/95 04/30/95	1	1997	1 1 1	1997 1997 1997
3	VA	Rinehart Tire Fire Dump	Frederick County	01 02 03	RA RA RI/FS	F F	09/29/89 08/26/94 06/17/94	1 1 1	1996 1995 1996	1 1 3	1996 1996 1997
3	VA	Saltville Waste Disposal Ponds	Saltville	02 04	RA RI/FS	PRP PRP	04/27/93 09/15/88	3 4	1995 1996	1 4	1996 1997
3	VA	U.S. Titanium	Piney River	01 ·	RA	PRP	08/18/94	3	1997	3	· 1997
3	WV	Allegany Ballistics Laboratory (USNAVY)	Mineral	01 02	RI/FS RI/FS	FF FF	11/10/94 12/20/94		• .	4	1996 1996
3	WV	Fike Chemical	Nitro	. 04 06 07	RI/FS RÁ RA	PRP PRP PRP	09/30/94 08/28/95 05/18/95	1	1996	1 3 1	1997 1996 1996
3	WV	Follansbee Site	Follansbee	01	RI/FS	PRP	09/27/90	1	1996	1	1997

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	CO	EVIOUS MPLETION HEDULE	CO	ESENT MPLETION HEDULE
3	WV	Ordnance Works Disposal Areas	Morgantown	02	RI/FS	PRP	06/04/90	3	1996	2	1997
3	WV	West Virginia Ordnance	Point Pleasant	04 08 09 10 11	RA RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF	05/26/95 09/28/93 09/28/93 01/24/95 01/04/94 11/24/94	3 2 3	1998 1998 1998	2 3 2 3 3	1996 1998 1998 1998 1998 1999
4	AL	Alabama Army Ammunition Plant	Childersburg	02 03 04 05 06	RA RA RI/FS RI/FS RI/FS	FF FF FF FF	01/04/95 10/02/94 09/27/94 09/29/94 09/27/94	2	1996 1996	3 4 2 1 3	1999 1995 1997 1997 1996
4,	AL.	Anniston Army Depot (Southeast Industrial Area)	Anniston	01 01 02	RI/FS RA RI/FS	FF FF FF	08/01/94 05/04/92 12/12/90	1 4 3	1998 1997 1996	1 · 4 3	1998 1997 1997
4	AL	Ciba-Geigy Corp. (McIntosh Plant)	McIntosh	01 05	RA RI/FS	PRP ·	09/28/89 05/21/93	3	.1996 2000	1	2019 2000
4	AL	Olin Corp. (McIntosh Plant)	McIntosh	02 03	RI/FS RI/FS	PRP EP	06/17/94 05/21/93	4	1995 2000	2	1996 2000
. 4	AL	Redstone Arsenal (USARMY/NASA)	Huntsville	01	RI/FS	FF	05/17/95			3	1998
4	AL	Stauffer Chemical Co. (Clemoyne Plant)	Axis	01 01 02 02 04	RA RA RI/FS RI/FS RI/FS	PRP PRP PRP PRP PRP	09/27/89 08/18/93 01/05/90 12/31/92 05/21/93	4 4 3 3 1	1999 1999 1995 1995 2000	4 4 4 1 1	1999 1999 1996 1998 2000
4	AL .	Stauffer Chemical Co. (Cold Creek Plant)	Bucks	01 01 04	RA RA RI/FS	PRP PRP F*	09/27/89 09/27/93 05/21/93	4 4 1	1999 1999 2000	4 4 1	1999 1999 2000

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	COM	VIOUS PLETION EDULE	COM	SENT PLETION EDULE
4	AL	T.H. Agriculture & Nutrition Co. (Montgomery Plant)	Montgomery	02	RI/FS	, PRP	07/14/94	4	1995	1	1996
4	FL	Agrico Chemical Co.	Pensacola	01	RA	PRP	09/23/94	1	1997	1	1997
4	FL	BMI Textron	Lake Park	01	RA	PRP	03/24/95		`	2	1998
4	FL	Broward County21st Manor Dump	Fort Lauderdale	01	R1/FS	F	03/02/93	1	2000	1	2000
4	FL	Cabot/Koppers	Gainesville	01 01 01 02	RA RA RA RI/FS	PRP PRP PRP F	12/29/93 09/29/93 09/23/94 05/17/94	1 . 4	1995 1996 1995	4 1 2 4	1995 1996 1999 1996
4	FL	Cecil Field Naval Air Station	Jacksonville	01 02 02 03 04 05	RI/FS RA RA RI/FS RI/FS RI/FS RA	FF FF FF FF FF	12/12/89 02/02/95 02/02/95 10/22/90 02/18/92 02/18/92 06/02/94	2 1 1 3	1995 1996 1996 1996 1999	3 1 2 4 1 1 3	1995 1996 1998 1999 1997 1997
4	FL	Chevron Chemical Co. (Ortho Division)	Orlando	01	RI/FS	PRP	01/25/93	3	1995	3	1995
4	FL	Davie Landfill	Davie	02	ŖA	PRP	07/28/95			3	1996
4	FL	Dubose Oil Products Co.	Cantonment	01	RA	PRP	02/16/93	4	1995	4	1995
4	FL	Escambia Wood-Pensacola	Pensacola	00	RI/FS	·F	09/20/94	2	1996	1	1997
4	FL	Florida Steel Corp.	Indiantown	01 02	RA RA	PRP	09/21/94 06/12/95	3	1996	3 3	1996 1996
4	FL	Helena Chemical Co.	Tampa	01 02	RI/FS RI/FS	PRP PRP	09/02/92 11/06/92	3 4	1995 1995	3 4	1995 1995

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	- ACTIVITY	LEAD	FUNDING START	COM	VIOUS PLETION EDULE	CO	ESENT MPLETION HEDULE
4	FL	Homestead Air Force Base	Homestead	02	RI/FS	FF	10/01/90	1	1996	2	1996
				05	RI/FS	FF	10/01/90	1	1996	1	1996
		•		07	RI/FS	FF	10/01/90	4	1996	1	
				08	RI/FS	FF	10/01/90	1		1	1997
				09	RI/FS	FF	05/21/93	. 2	1996 1996	1	1997 1997
4	FL	Jacksonville Naval Air Station	Jacksonville	04				-	ν.	•	
		and the state of t	Jacksonville	01	RI/FS	FF	10/08/90	2	1996	2	1996
				01	RA	FF	03/20/95			1	2000
		•		02	RI/FS	FF	07/01/92	3	1997	3	1997
				02	RA	FF	03/06/95			1	1997
				03	RI/FS	FF	12/17/93	1	1996	2	1997
4	FL ,	Kassauf-Kimerling Battery Disposal (once listed as Timber Lake Battery Disposal)	Tampa	02	RA .	PRP	09/02/94	4	1995	3	1996
•	FL	Madison County Sanitary Landfill	Madison	01	RA	PRP	02/07/95			1	1997
	•	LandTitt		,							
4	FL	Munisport Landfill	North Miami	- 01	RA .	PRP	06/05/95	•		1	1998
4	FL	Peele-Dixie Wellfield Site	Fort Lauderdale	01	RI/FS	F	02/16/94	2	1996	2	1996
<b>,</b>	FL	Pensacola Naval Air Station	Pensacola	01	RI/FS	FF	11/01/90	2	1996	3	1997
		•		02	RI/FS	FF	10/15/90	3	1996	1	1997
		•	•	03	RI/FS	FF	10/15/90	3		. 1	1997
		•	* :	04	RI/FS	FF	10/15/90	4	1996	1	
		· · · · · · · · · · · · · · · · · · ·	•	05	RI/FS	FF	10/15/90	3	1996	•	1997
				06	RI/FS	FF	10/15/90	1	1996	1	1997
				07	RI/FS	FF	10/15/90	-		3	1996
				08	RI/FS	FF		2	1996	1	1997
			-	10			10/15/90	3	1996	1	1997
				11	RI/FS	FF	06/24/91	2	1996	3	1996
				13	RI/FS	FF	10/01/91	3	1996	1	1997
		•	•		RI/FS	FF	10/01/91	1	1997	7	1997
				14	RI/FS	FF	10/01/91	4	1996	1	1997
		•		15	RI/FS	FF	11/29/93	4	1997	4.	1997
			•	16	RI/FS	FF	11/29/93	4	1997	4	1997.
				17	RI/FS	FF	11/29/93	4	1997	4	1997

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETIO SCHEDULE	
4	FL	Pepper Steel & Alloys, Inc.	Medley	01	RA	PRP	03/26/87	4	1995	4	1995
4	FL	Petroleum Products Corp.	Pembroke Park	02	RI/FS	F	09/15/89	3	1996	3	1996
4	FL	Pickettville Road Landfill	Jacksonville	02	RA	PRP	09/30/93	1	1996	1	1997
4	FL	Sapp Battery Salvage	Cottondale	01 02	RA RI/FS	PRP F	03/10/93 09/30/90	3 4	1996 1995	<b>3</b> 4	1996 1996
4	FL	Schuylkill Metal Corp.	Plant City	01 01	RA RA	PRP PRP	06/24/92 06/07/94	3 1	199გ 1997	3 1	1996 1997
4	FL	Sherwood Medical Industries	Deland	- 03	RI/FS	PRP	06/25/93	2	1995	2	1996
4.	FL	Stauffer Chemical Co (Tarpon Springs)	Tarpon Springs	01	RI/FS	PRP	. 07/28/92	2	1995	2	1996
4	FL	Stauffer Chemical Co. (Tampa Plant)	Tampa	01 02	RI/FS RI/FS	PRP PRP	09/02/92 12/12/92	3 4	1995 1995	3 4	1995 1995
4	FL	Tower Chemical Co.	Clermont	02	RI/FS	F .	03/22/94	4	1995	4	1995
4	FļL	Whitehouse Oil Pits	Whitehouse	. 01	RI/FS	F .	04/15/94	4	1995	2 .	1996
4	FL	Wingate Road Municipal Incinerator Dump	Fort Lauderdale	<b>Q1</b>	RI/FS	PRP	09/27/91	2	1995	2	1995
4	FL	Yellow Water Road Dump	Baldwin	01	RA	PRP	06/17/95			2	1997
4	FL	Zellwood Ground Water Contamination	Zellwood	01	RA	F	09/21/92	2	1995	2	1995
4	GA	Cedartown Municipal Landfill	Cedartown	01	RA	MR	11/04/94			3	1997
4	GA	Diamond Shamrock Corp. Landfill	Cedartown	01	RA	PRP	06/29/95			. 4	2015
4	GA	LCP Chemicals Georgia	Brunswick	01	RI/FS	PRP	07/06/95			1	1997

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RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		CO	ESENT MPLETION '
4	GA	Marine Corps Logistics Base	Albany	01 01 02 03	RI/FS RA RI/FS RA	FF FF FF	07/23/91 12/30/94 07/23/91 11/29/93	3 3 2	1996 1996 1998	1 4 1 2	1997 1999 1997 1998
				04	RI/FS	FF	09/15/92	1	1996	3	1997
4	GA	Marzone Inc./Chevron Chemical. Co.	Tifton	02	RI/FS	F.	04/15/95		•	3	1997
4	GA	Robins Air Force Base (Landfill #4/ Sludge Lagoon)	Houston County	01 02	RA RA	FF FF	12/31/91 08/02/94	4	1996	1 3	1998 1998
4	GA	T.H. Agriculture & Nutrition Co.	Albany	02	RI/FS	PRP	01/20/93	3	1995	1	1996
4	· KY	Airco	Calvert City	01	RA	PRP	09/29/95			4	1997
4	KY	B.F. Goodrich	Calvert City	01	RA	PRP	09/29/95			4	1997
4	. KY	Distler Brickyard	West Point	01	RA	F	09/28/88	4	1996	4	2000
4	KY	National Electric Coil/Cooper Industries	Dayhoit	- 01	, RA	PRP'	02/25/93	3	1995	3	1995
4	KY	National Southwire Aluminum Co.	Hawesville	01	RA	PRP	12/12/94			1	1996
4	ĶΥ	Paducah Gaseous Diffusion Plant (USDOE)	Paducah	01 04 05 06	RI/FS FS RI/FS RA	FF FF FF	04/10/89 08/12/93 09/10/92 03/27/95	4 2 3	1999 1995 1998	4 2 3 1	1999 1997 1996 1996
	٠			07 08 10 11 13	RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF	07/09/93 03/29/95 04/27/93 06/28/93 07/25/94	4 3 4	1999 1999 1999 1999	4 3 4 3 3	1999 1998 1999 1999 1997

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	CO	EVIOUS PLETION REDULE	COM	SENT PLETION EDULE
4	KY	Red Penn Sanition Co. Landfill	Peewee Valley	01	RI/FS	F	08/18/89	4	1994	4	1994
4	KY	Smith's Farm	Brooks	01	RA	PRP	05/20/93	2	1996	2	1996
4	MS	Chemfax, Inc.	Gulfport	01	RI/FS	EP*	09/07/94	4	1996	.3	1996
4	MS	Newson Brothers/Old Reichhold Chemicals, Inc.	Columbia	02	RI/FS	PRP	10/21/94		`	1	1996
4	NC	Aberdeen Pesticide Dumps	Aberdeen	05	RI/FS	PRP	03/21/94	1	1996	3	1996
4	. NC	Battery Tech (Duracell-Lexington)	Lexington	01	RI/FS	PRP*	09/09/94	4	1995	2	1996
	NC	Camp Lejeune Military Reservation (Marine Corp Base)	Onslow County	02 03 05 07 08 09	RA RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF FF	03/20/95 01/27/95 08/21/91 06/08/94 06/30/93 12/02/91 04/13/92	3 3 1 1 4	1995 1996 1996 1996 1996	1 4 3 1 2 3	1999 1996 1995 1997 1996 1996
				11 12 . 13 . 14	RA RI/FS RI/FS RI/FS	FF FF FF	07/21/95 04/04/94 04/04/94 06/23/95	1	1996 1996	1 1 1	1996 1997 1997 1997
4	NC	Cape Fear Wood Preserving	Fayetteville	01	RA	.⁺ <b>F</b>	09/29/94	2	2000	2	2000
4	NC	Charles Macon Lagoon & Drum Storage	Cordova	· 01	RA .	PŘP	06/28/94	1	2000	1	2000
. 4	NC	Chemtronics, Inc.	Swannanoa ·	01	RA	PRP	06/10/91	4	1995	4	1996
4	NC	Cherry Point Marine Corps Air Station	Havelock	03	RI/FS	FF	07/12/95			3	1996
4	· NC	DAVIS PARK ROAD TCE SITE	NEED TO IDENTIFY	01	RI/FS	F	06/29/95			2	1997

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RG .	ST ·	SITE NAME	LOCATION	OPER- ABLE Unit	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	CO	RESENT OMPLETIC CHEDULE	
4	NC	FCX, Inc. (Statesville Plant)	Statesville	03	RI/FS	PRP	06/25/93	3 1995	3	1995	
4	NC	Jadco-Hughes Facility	Belmont	01	RA	PRP	06/20/95		4	2001	
4	NC -	Koppers Co., Inc (Morrisville Plant)	Morrisville	01	RA .	PRP	06/22/95		. 3	1999	
4	NC	Martin-Marietta, Sodyeco, Inc.	Charlotte	01	RA .	PRP	09/25/89	2 1999	2	1999	
4	NC	National Starch & Chemical Corp.	Salisbury	01	RA	PRP	06/27/90	2 1999	, 2	1999	
4	NC	North Carolina State University (Lot 86, Farm Unit #1)	Raleigh	01	RI/FS	PRP	03/31/92		· 1	1996	
4	NC	Potter's Septic Tank Service Pits	Maco	. 01	RA	F	09/23/94	1 1997	1	1997	
4	SC	Aqua-Tech Environmental Inc (Groce Labs)	Greer	01	RI/FS	PRP	09/26/95		4	1997	
4	SC	Calhoun Park/Ansonborough Home	Charleston	01	RI/FS	PRP .	01/22/93	3 1995	2	1996	
4.	sc	Carolawn, Inc.	Fort Lawn	.01	RA	PRP	05/12/93	2 1995	. 1	1996	
4	sc	Geiger (C & M Oil)	Rantoules	01 02	RA RA	F F	03/31/92 01/19/94	4 1994 1 1996	2 3	1996 1997	
4	SC	Golden Strip Septic Tank Service	Simpsonville	01	RA	PRP	02/28/94	2 1995	1	1996	
4	SC	Koppers Co., Inc (Florence Plant)	Florence	01	RI/FS	PRP	02/29/88	4 1994	2	1997	
4	SC	Koppers Co., Inc. (Charleston Plant)	Charleston	01	RI/FS	PRP	01/14/93	2 1995	2	1995	

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	SCHEDULE		PRESENT N COMPLETIC SCHEDULE	
4	sc	Leonard Chemical Co., Inc.	Rock Hill	01	RI/FS	PRP	12/13/90	1	1995	2	1996
4.	sc	Palmetto Wood Preserving	Dixiana	02	RA	F	09/25/89	4	1995	2	1996
4	sc	SCRDI Bluff Road	Columbia	01	RA	PRP	06/22/94	4	1994	1	1995
4	SC	Sangamo Weston, Inc./Twelve-Mile Creek/Lake Hartwel PCB	Pickens	01	ŔA	PRP	11/22/93	4	1994	1	1997
4	sc	Savannah River Site (USDOE)	Aiken	04	RI/FS	FF	02/28/90	4	1996	1	1997
			*	05	RI/FS	FF	02/28/90	4	1996	1	1997
		•		10	RI/FS	FF	01/09/91	3	1995	3	1995
-		-	-	11	RI/FS	FF	03/06/91	3	1997	3	1997
				13	RI/FS	FF	06/07/91	4	1996	4	1996
				14 ·	RI/FS	FF	07/01/91	3	1996	3	1996
		• •	•	15	RI/FS	FF	07/01/91	3	1996	3	1996
			•	16	RI/FS	FF	03/06/91	4	1996	1	1997
		· ·		17	RI/FS	FF	05/08/91	2	1997	2	1997
				18	RI/FS	FF	07/01/91	2	1997	2	1997
		•		19	RI/FS	FF .	08/05/91	4	1997	4	1997
			•	20	RI/FS	FF	10/31/91	1	1998	1	1998 .
			•	21	RI/FS	FF	10/28/91	1	1999	·1	1999
		•		22	RI/FS	FF	03/25/92	3	1997	3	1997
			,	23	RI/FS	FF	10/21/91	3	1997	3	1 <del>99</del> 7
				24	RI/FS	FF	02/25/92	4	1997.	4	1997
			•	25	RI/FS	FF	02/05/92	4	1998	4	1998
				26	RI/FS	FF ·	07/15/92	1	1998	1	1998
			•	27	RI/FS	FF	08/15/92	4	1996	1	1999
			·	29	RA	FF	08/23/95			2	1997
			•	31	RI/FS	FF	07/16/90	3	1998	3	1998
				32	RI/FS	FF	08/06/90	1	1997	1	1997
		•		36	RI/FS	FF	12/29/89	1	1996	2	1997
				37	RI/FS	FF	08/05/91	1	1996	. 2	1997
				38	RI/FS	FF	01/31/95			1	1998
		•		<b>39</b> .	RI/FS	FF `	03/31/95			1	1998
				40	RI/FS	FF	03/31/95			1	- 1998
				44	RI/FS	FF	12/29/89	4	1999	4	1999
				45 .	RI/FS	FF	02/15/92			2	1995
				46	RI/FS	FF	05/15/93			1	.1997

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RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	ACTIVITY	LEAD	FUNDING START	CON	VIOUS PLETION EDULE	CO	ESENT MPLETION HEDULE
- 4	SC	Shuron Inc	Barnwell ·	01	RI/FS	PRP	11/21/94			2	1996
4	sc	Townsend Saw Chain Co.	Pontiac ·	01	RA	PRP	06/21/95			3	1996
4	sc	Wamchem, Inc.	Burton	01 01	RA RA	PRP PRP	12/04/92 07/26/95	4	1995	2	1996 1996
4	TN	American Creosote Works, Inc. (Jackson Plant)	Jackson	02	RI/FS	F	12/29/89	- 1	1994	1.	1994
4	TN	Arlington Blending & Packaging	Arlington	01-	RA	PRP	12/12/94			1	1996
4	TN .	Carrier Air Conditioning Co.	Collierville	01	RA	PRP	11/03/94			3	1995
4	TN	Mallory Capacitor Co.	Waynesboro	01	RA	PRP	06/08/93	3	1996	4	1997
4	TN	Memphis Defense Depot (DLA)	Memph is	01 02 03 04	RI/FS RI/FS RI/FS RI/FS	FF FF FF	01/11/94 02/09/94 03/10/94 05/09/94	3 3 3 3	1996 1996 1996 1996	3 3 3 4	1996 1998 1998 1998
4	TN	Milan Army Ammunition Plant	Milan	01 02 03 04 09 10 11 12	RA RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF FF FF	11/15/93 11/01/94 10/01/89 10/01/89 10/01/89 10/01/89 10/01/89 07/23/90 11/26/91	1 1 1 1 1 1 1 1	1998 1996 1996 1996 1996 1996 1996 1996	1 2 3 1 1 1 1 1 1 1	1998 1997 1997 1997 1997 1997 1997 1997
4	TN	North Hollywood Dump	Memph is	01	RA	PRP	09/27/93	4	1996	4	1996
4	TN	Oak Ridge Reservation (USDOE)	Oak Ridge	04 05 06 07	RI/FS RI/FS RA RI/FS	FF FF FF	03/31/90 03/31/90 05/15/95 06/05/90	4 4	1997 1999 1998	4 4 3 4	1997 1999 1996 1998
				09 12 13	RI/FS RI/FS RI/FS	FF FF	06/05/90 01/03/90 06/09/90	3 3 1	1998 · 1999 2001	.3 3 3	1998 1999 1998

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
	•		· .	14 15 19	RI/FS RI/FS RI/FS	FF FF	10/25/86 09/14/90 10/25/86	3 1997 1 1999 1 1999	3 1997 1 1999 3 1997
	ii.			20 21 22 23	RI/FS RI/FS RI/FS	FF FF FF	07/16/90 08/28/92 12/28/90 01/14/91	1 1998 2 1998 3 1999 4 1999	3 1996 2 1998 3 1998 3 1999
				25 26 27 29	RI/FS RI/FS RI/FS RI/FS	FF FF FF	10/25/86 08/31/92 10/02/91 02/01/93	4 1999 1 1996 4 1996 1 1996	4 1999 3 1996 2 1996 4 1999
				30 <sup>*</sup> 31 32 33 34	RI/FS RI/FS RI/FS RI/FS	FF FF FF FF	10/04/93 09/23/93 09/30/93 10/25/86 12/02/92	4 1999 4 1998 2 1999 2 1996 4 1999	4 1999 4 1998 2 1999 4 1999 4 1999
				35 36 37	RI/FS RI/FS RI/FS RI/FS	FF FF FF	02/02/94 03/31/94 12/31/92	4 1999 4 1999 4 1999 1 1998	4 1999 4 1999 1 1997
4	TN	Tennessee Products	Chattanooga	40 01	RI/FS RI/FS	FF F	12/22/94 03/22/95		2 1997 3 1997
4	TN	Velsicol Chemical Corp. (Hardeman County)	Toone	01	RA	PRP	05/26/95		2 1997
. 4	TN	Wrigley Charcoal Plant	Wrigley	01.	RA	Ė.	09/29/93	1 1995	2 1995
5	IL	Acme Solvent Reclaiming, Inc.	Morristown	06	RA	PRP	, 09/29/94	1 2000	1 2000
5	IL	Amoco Chemicals (Joliet Landfill)	Joliet	01	RI/FS	PS	04/07/94	3 1996	3 1996
. 5	IL	Beloit Corp.	Rockton	. 01	RI/FS	P\$ ·	09/27/90	2 1996	2 1998
5	11.	Byron Salvage Yard	Byron	03 03 04	RA RA RI/FS	S* S EP	09/04/92 08/25/94 12/29/89	<ul><li>2 1999</li><li>3 1995</li></ul>	2 1999 2 1996 3 1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY		FUNDING	CO	EVIOUS MPLETION	CO	ESENT MPLETION
5	IL	Central Illinois Public Service Co.	Taylorville	01	RA	LEAD PS	02/22/94	<u>sc</u> 2	HEDULE 1995	<u>sc</u> 1	1996
5	IL	Cross Brothers Pail Recycling	Pembroke Township	01 · 01	RA RA	PRP PRP	09/30/93 05/26/95	4	1995	1	1996
5	IL.	DuPage County Landfill/Blackwell Forest Preserve)	Warrenville	01	RI/FS	PRP	09/29/89	3	1995	1	1996 1997
5	. IL	Galesburg/Koppers Co.	Galesburg	01	RA	PS	05/05/95			2	1999
5	IL	H.O.D. Landfill	Antioch	01	RI/FS	PRP	08/20/90	3	1995	3	1996
5	IL	Ilada Energy Co.	East Cape Girardeau	01	RI/FS	PRP .	06/19/89	2	1993	1	1996
5	IL.	Joliet Army Ammunition Plant (Manufacturing Area)	Joilet	01	RI/FS	FF	06/09/89	2	1995		1996
5	IL	Joliet Army Ammunition Plant(Load-A ssembly-Packing Area	Joliet	01	RI/FS	FF	06/09/89	4	1995	2	1996
5	IL	Kerr-McGee (Kress Creek/West Branch of Dupage River)	DuPage County	01	RI/FS	F	09/30/92	3	1996	1.	1997
5	11	Kerr-McGee (Reed-Keppler Park)	West Chicago	01	RI/FS	F	05/20/92	4	1996	4	1998
<b>.</b> 5	IL .	Kerr-McGee (Residential Areas)	West Chicago/DuPage Cnty	01	RI/FS	F	09/17/93	4	1997	4	1997
5	IL	Kerr-McGee (Sewage Treat Plant)	West Chicago	01	RI/FS	F	05/20/92	4	1996	4	1998
5	IL	LaSalle Electric Utilities	LaSalle	02	RA	s	04/11/89	1	2005	1	2005
5	IL	Lenz Oil Service, Inc.	Lemont	01	RI/FS	PRP	09/29/89	3	1995	1	1997

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	COM	VIOUS PLETION EDULE	COM	SENT PLETION EDULE
5	IL	MIG/Dewane Landfill	Belvidere	01	RI/FS	F	05/01/95			4	1997
5	IL	NL Industries/Taracorp Lead Smelter	Granite City	01 01	RA RA	F F	09/30/92 09/30/93	4	1997	4	1997 1999
5	IL	Ottawa Radiation Areas	Ottawa	01	RI/FS	F	03/26/93	2	1996 、	1	1997
5	IL	Outboard Marine Corp.	Waukegan	02 03	RI/FS RA	PRP PRP	09/26/90 06/27/93	1 2	1996 1995	1	1997. 1996
5	1L	Pagel's Pit	Rockford	02	RI/FS .	PRP	08/13/91	1	1995	4	1996
<b>5</b> .	IL	Parsons Casket Hardware Co.	Belvidere	01	RI/FS	s	09/29/88	, 1	1995	3	1996
5 <sup>.</sup>	IL	Sangamo Electric Dump/Crab Orchard National Wildlife Refuge (USDOI)	Carterville	01 02 03 04	RA RA RI/FS RI/FS	FF PŘP FF FF	06/30/93 09/27/95 09/13/91 09/13/91	4 2 3	1996 1996 1996	4 1 3 4	1996 1998 1996 1996
5	IL	Savanna Army Depot Activity	Savanna	02	RI/FS	FF	09/29/89	1	1995	1	1996
5	IL	Wauconda Sand & Gravel	Wauconda	02	RA	PRP	09/30/91	1	1995	3	1996
5	IL	Yeoman Creek Landfill	Waukegan	01	RI/FS	PRP	12/22/89	2	1995	1	1996
5	IN	Conrail Rail Yard (Elkhart)	Elkhart	01	RA	PRP	08/29/94			4	1996
5	IN	Continental Steel Corp.	Kokomo	01 02 03	RI/FS RI/FS RI/FS	s s s	05/25/90 08/26/91 03/27/92	1 2 2	1998 1996 1996	3 3 3	1997 1997 1997
5	IN	Fisher-Calo	LaPorte	· 01	RA	PRP	09/30/95			2	1998
5	IN	Fort Wayne Reduction Dump	Fort Wayne	01	RA	PRP	09/20/90	2.	1995	2	1996
5	IN	Lemon Lane Landfill	Bloomington	01	RI/FS .	PRP	05/08/95			4	1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
. 5	IN	MIDCO I Site	Gary	01	RA	PRP	07/22/93	3	1995	4	1996
5	1 N	MIDCO II Site	Gary	01	RA	PRP	08/23/93	3	1995	2	1996
5	IN	Neal's Landfill (Bloomington)	Bloomington	01	RA	PRP	07/07/88	2	1989	.2	1989
5	IN	Ninth Avenue Dump	Gary	02	RA	PRP	02/14/94			1	1997
, 5	IN	Northside Sanitary Landfill, Inc.	Zionsville	01	RA	PRP	09/30/94	2	1999	2	1999
5	IN	Reilly Tar & Chemical Corp. (Indianapolis Plant)	Indianapolis	04 05	RI/FS RI/FS	FE*	09/21/92 09/21/92	2	1995 1995	4	1995 1995
5	IN	Seymour Recycling Corp.	Seymour	01 02	RA RA	PRP PRP	08/17/87 09/08/89	3	1995 1995	3	1997 1996
5	IN	Tippecanoe Sanitary Landfill, Inc.	Lafayette	01	RI/FS	PRP	03/08/90	2	1995	1	1997
5	IN	Tri-State Plating	Columbus	01	RA	F	03/29/91 .	2	1999	2	1999
5	MI	Allied Paper, Inc./Portage Creek/Kalamazoo River	Kalamazoo	02 03 04 05	RI/FS RI/FS RI/FS RI/FS	PS PS PS PS	12/28/90 12/28/90 12/28/90 12/28/90		•	1 1 3 1	1998 1997 1997 1999
5	MI	Bendix Corp./Allied Automotive	St. Joseph	01	RI/FS	PRP	02/13/89	3	1996	3	1996
5	MI	Bofors Nobel, Inc.	Muskegon	01 02	RA RI/FS	F S	09/25/92 03/31/90	1 2	2000 1996	1 2	2000 1996
5	MI	Carter Industrials, Inc.	Detroit	01	RA	PRP	06/09/95			3	1996
5	MI	Chem Central	Wyoming Township	01	RA	PRP	08/18/94			4	1996
5	MI	Cliff/Dow Dump	Marquette	01	RÁ	PRP	07/05/95	÷		4	1996

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		SITE NAME	L. 004770W	OPER-	ACTIVITY	LEAD	FUNDING START	COM	VIOUS PLETION EDULE	COM	SENT PLETION EDULE
RG	ST	SITE NAME	LOCATION	UNIT	ACITATII	LEAU	SIANI	301	LDOLL	001	LOULL
5	MI	Electrovoice	Buchanan	02	RI/FS	F	09/15/92	3	1995	1	1997
5	MI	G&H Landfill	Utica	01	RA	PRP	06/02/95			1	1999
5	MI	Hi-Mill Manufacturing Co.	Highland	01	RA	PRP	06/28/95			3	1996
5	MI	Ionia City Landfill	Ionia	02	RI/FS	PRP	01/29/86		•	4	1996
5	MI	J & L Landfill	Rochester Hills	02	RI/FS	F	07/12/94			2	1996
. 5	MI	Kentwood Landfill	Kentwood	01	RA	PRP	03/17/94	1	1996	1	1996
5	MI	Kysor Industrial Corp.	Cadillac	01	RA	PRP	03/03/95		-	2	2020
5	MI	Liquid Disposal, Inc.	Utica	01	RA ,	PRP	09/30/92	. 1	1998	4	1996
5	MI	Lower Ecorse Creek Dump	Wyandotte	01	RI/FS	F	03/14/94	4	1996	2	1997
5	MI	Metal Working Shop	Lake Ann	01	RI/FS	ĖP	11/15/90			3	1992
5	MI	North Bronson Industrial Area	Bronson	01	RI/FS	s	06/24/87	1	1996	2	1996
5	MI	Northernaire Plating	Cadillac	02	RA	PRP	03/03/95			2	2020
5	MI	Novaco Industries	Temperance	01	RA	F	04/23/92			4	1997
5	MI	OTT/Story/Cordova Chemical Co.	Dalton Township	01 02 03	RA RA RA	F F	09/25/91 09/28/92 03/29/95	· 1	1996 1996	1 2 4	1996 1996 1997
5	MI	Organic Chemicals, Inc.	Grandville	01 02	RĄ RI/FS	F* F	02/09/94 04/22/88	3 4	1995 1995	· 1	1996 1996
5	MI	Parsons Chemical Works,	Grand Ledge	01	RI/FS	s	09/29/89	2	-1996	.1	1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	COM	VIOUS PLETION EDULE	CO	ESENT MPLETION HEDULE
5	MI	Petoskey Municipal Well Field	Petoskey	01	RI/FS	S	10/05/90			3	1997
5	MI	Rasmussen's Dump	Green Oak Township	01	RA	PRP	03/16/95			.1	1996
5	MI.	Rockwell International Corp. (Allegan Plant)	Allegan	02	RI/FS	FE	03/31/88		×	1	1997
5	MI	Rose Township Dump	Rose Township	01	RA	PRP	09/08/92	1	1996	2	1996
5	MI	Roto-Finish Co., Inc.	Kalamazoo	01	RI/FS	PRP	12/18/87	3	1995	3	1996
5	MI	SCA Independent Landfill	Muskegon Heigths	01	RI/FS	PS	10/20/93	1	1997	1	1997
5	MI	Shiawassee River	Howell	Ò1	RI/FS	s	06/19/87	3	1995	4	1996
5	MI	Sparta Landfill	Sparta Township	01	RI/FS	PRP	09/23/93	4	1997	1	1998
5	MI	Spartan Chemical Co.	Wyoming	01	RI/FS	s	02/16/94	1	1996	- 1	
5	1M :	Spiegelberg Landfill	Green Oak Township	02	RA	PRP	07/17/94	3	1995	1	1996
5	MI	Sturgis Municipal Wells	Sturgis	01	RA	PRP ·	05/12/93	1	2000	1	2000
5	MI	Tar Lake	Mancelona Township	01	RI/FS	PRP	01/29/86			3	1993
5	MI	Thermo-Chem, Inc.	Muskegon	02	RI/FS	PRP	09/21/87	3	1993	2	1998
5	MI	U.S. Aviex	Howard Township	01	RA ·	F	09/27/91	1	1995	1	1996
5	MI	Verona Well Field	Battle Creek	02 02	RA RA	F PRP	04/12/95 12/28/94			2 2	1996 1996
5	MI	Wurtsmith Air Force Base	losco County	01	RI/FS	FF	01/03/95.	*		2	1997

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	COM	VIOUS PLETION EDULE	COM	SENT PLETION EDULE
5	MN	Agate Lake Scrapyard	Fairview Township	01	RA	PS	07/08/94			1	2000
5	MN	Arrowhead Refinery Co.	Hermantown	01 01	RA RA	S* PRP	08/15/90 04/20/95	1	1996	4 2	2000 1996
5	MN	Burlington Northern (Brainerd/Baxte r Plant)	Brainerd/Baxter	01	RA	PRP	03/31/87	4	1995 、	2	1996
5	MN	Freeway Sanitary Landfill	Burnsville	01	RI/FS	PS	03/27/86			1	1996
5	MN	Long Prairie Ground Water Contamination	Long Prairie	01 02 03	RA RA RA	S S S	04/11/91 04/11/91 12/09/93	2 2 3	2021 2021 1995	3 3 2	1996 1996 1996
5	MN	MacGillis & Gibbs Co./Bell Lumber & Pole Co.	New Brighton	01 .	RA	s	09/30/94	3	1996	4	1998
5	MN	Naval Industrial Reserve Ordnance Plant	Fridley	01 02	RA RI/FS	FF FF	06/14/91 03/28/91	4 2	1999 1996	4 2	1999 1996
· 5	MN	Oak Grove Sanitary Landfill	Oak Grove Township	02.	RA	PRP	08/05/92 ·	4	1999	. 4	1999
5	MN	Reilly Tar & Chemical Corp.	St. Louis Park	02 04	RA RA	PRP PRP	09/30/87 04/01/91	1	1996 1999	1 4	1996 1999
5	ОН	Allied Chemical & Ironton Coke	Ironton	02 02	RA RA	PRP PRP	03/03/95 03/03/95		•	1 4	2026 1996
5	ОН	Alsco Anaconda	Gnadenhutten	· 01 02	RA RA	PRP PRP	09/30/91 09/28/94	1	1996 1996	1	1996 1996
5	ОН	Big D Campground	Kingsville	01	RA .	PRP	05/11/94	1	2016	1	2016 .
5	ЮН	Buckeye Reclamation	St. Clairsville	01	RA	·PRP	02/10/95		•	4	1998
5	ОН	Coshocton Landfill	Franklin Township	01	RA	PRP	12/03/93	. 5	1996	2	1996

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RG	.ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	CO	EVIOUS MPLETION HEDULE	CC	RESENT OMPLETION CHEDULE
5	ОН	Dover Chemical Corp.	Dover	01	RI/FS	PRP	08/24/88	2	1996	3	
5	OH	Feed Materials Production Center (USDOE)	Fernald	03 05	RI/FS RI/FS	FF FF	04/09/90 04/09/90	2	1996 1995	2 2	1996 1996
-5	OH	Fields Brook	Ashtabula	02 03 03 04	RI/FS RI/FS RI/FS RI/FS	PRP PRP F PRP	03/22/89 09/26/89 09/09/94 01/10/93	2 2	1995 1995	1 4 4 1	1996 1996 1996 1996
5	OH	Miami County Incinerator	Troy	01	RA	PRP	05/20/95			2	1996
5	OH	Mound Plant (USDOE)	Miamisburg	02 05 06 09	RI/FS RI/FS RI/FS RI/FS	FF FF FF	06/21/93 02/04/93 07/17/92 05/22/92	3 4 1 1	2000 1997 2001 2008	3 4 1	2000 1997 2001 2008
5	ОН	Nease Chemical	Salem	01	RI/FS	PRP	01/27/88	. 3	1995	2	1996
5	ОН	New Lyme Landfill	New Lyme	01	RA	F	04/11/88	1	1995	2	1996
. 5	OH	Pristine, Inc.	Reading	04	RA	PRP	05/30/94	2	1995	1	1996
5	OH	Reilly Tar & Chemical Corp. (Dover Plant)	Dover	01	RI/FS	PRP	03/29/89	4	1995	4	1996
5	ОН	Rickenbacker Air National Guard (USAF)	Lockbourne	00	RI/FS	FF	09/15/93	÷	•	i	1996
5	ОН	South Point Plant	South Point	01	RI/FS	PRP	03/31/87			1	1996
5	OH	Summit National	Deerfield Township	01	RA	PRP	06/22/93	3	1997	1	1996
5	ОН	United Scrap Lead Co., Inc.	Troy	. 01	RA ·	F	09/17/92	4	1995	1	1996
<b>5</b>	OH	Wright-Patterson Air Force Base	Dayton	01 02 03 04 05	RA RI/FS RI/FS RI/FS RI/FS	FF FF FF FF	10/03/94 07/10/92 10/01/92 10/01/92 10/01/92	3 1 4 1	1996 1996 1996 1996	3 3 4 4 4	1996 1996 1996 1996 1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	COM	VIOUS PLETION EDULE	COM	SENT PLETION EDULE
				06 07 08 09 10 11	RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF FF	03/16/93 12/12/94 06/28/94 01/10/94 07/28/93 12/12/94 08/31/95	4 3 3	1997 1997 1998 1996	4 4 4 3 3 4 2	1997 1997 1997 1998 1996 1997 1998
5	WI	Better Brite Plating Co. Chrome and Zinc Shops	DePere	01 02	RI/FS RA	S F	09/28/90 08/05/91	2 3	1996 1997	1 3	1997 1997
5	WI	City Disposal Corp. Landfill	· Dunn	01	RA	PRP	03/30/95			1	1998
5	MI	Delavan Municipal Well #4	Delavan	01	RI/FS	PS	09/28/90	1	1996	1	1996
5	WI	Fadrowski Drum Disposal	Franklin	01	RA	PRP	05/21/93	2	1994	1	1996
5	WI	Hagen Farm	Stoughton	01 02	RA RA	PRP PRP	08/14/91 05/19/95	. 1	1997	1	1997 1997
5	WI	Hunts Disposal	Caledonia	01	RA	PRP	07/06/95			2	1997
5	WI	Kohler Co. Landfill	Kohler	02	FS	PRP*	07/31/92.	3	1995	2	1996
5	WI	Lauer I Sanitary Landfill	Menomonee Falls	01	RI/FS	PS	08/01/90			1.	1996
5	WI	Lemberger Landfill, Inc. (Lemberger Fly Ash Landfill)	Whitelaw	01 ·	RA	PRP	03/08/95	•		. 4	1996
5	WI	Lemberger Transport & Recycling	Franklin Township	01	RA	PRP	03/08/95			4	1996
5	WI	Madison Metropolitan Sewerage District	Blooming Grove	01	RI/FS	PRP	09/24/92	2	1995	2	1996
5	WI	Master Disposal Service Landfill	Brookfield	01	RA	PRP	03/29/94	3	1995	2	1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESEN COMPLE SCHÉDL	ETION
. 5	WI	Moss-American (Kerr-McGee Oil Co.)	Milwaukee	. 01	RA	F	05/19/95	•		000
5	ΝĬ	Muskego Sanitary Landfill	Muskego .	01	RA	PRP	10/07/93	2 1995	1 19	996
5	WI	National Presto Industries, Inc.	Eau Claire	01 03	RA RI/FS	PRP PRP	11/12/93 06/04/86	2 1999 3 1995		999 996
5	WI	Oconomowoc Electroplating Co., Inc.	Ashippin	01 01 02	RA RA RI/FS	F F	09/30/91 05/12/94 09/20/90	2 1995 3 1996 1 1997	4 19 3 19	996 996 997
5	WI .	Onalaska Municpal Landfill	Onalaska	01	RA	F	02/28/92	1 1995		96
5	WI	Scrap Processing Co., Inc.	Medford	01	RI/FS	F	05/11/92	2 1995	1 19	96
5	WI	Sheboygan Harbor & River	Sheboygan .	01	RI/FS	PRP	04/11/86	1 1996	3 19	96
5	WI	Spickler Landfill	Spencer	01	RA	PRP	02/23/94	1 1995		95
5	WI	Tomah Armory	Tomah	01	RI/FS	FE*	05/27/93	2 1996		96
5	ŴI	Tomah Fairgrounds	Tomah	01	RI/FS	F*	05/27/93	1 1996		96
5	WI	Tomah Municiple Sanitary Landfill	Tomah	01	RI/FS	PRP	01/11/94	2 1996		97
5	WI	Wheeler Pit	La Prairie Township	01	RA ,	PRP	05/21/92	1 1998	1 19	98
6	AR	Frit Industries	Walnut Ridge	01	RA	PRP	09/08/83	2 1995	4 19	95
6	AR .	Gurley Pit	Edmondson	01	RA ,	F	03/29/89	1 1995	4 19	
6	AR	Midland Products	Ola/Birta	01	RA	s	06/29/90	1 1995	4 199	
6	AR	Popile, Inc.	El Dorado	01 01	RI/FS RA	F F	12/27/91 09/27/94	1 1995 1 1999	4 199	95
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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
6	AR	Vertac, Inc.	Jacksonville	02 03 06	RA RI/FS RI/FS	F PRP F	09/26/94 07/12/89 07/12/89	2 1996 1 1995 4 1995	2 · 1996 1 1996 4 1996
6	LA	Agriculture Street Landfill	New Orleans	01	RI/FS	F	03/14/95		2 1996
6	LA	American Cresote Works, Inc (Winnfield)	Winnfield	. 01	RA	F	09/28/93	1 1996 `	1 1996
6	LA	Bayou Bonfouca	Slidell	02	RA	F	02/04/91	4 1997	4 1997
6	LA	Cleve Reber	Sorrento	01	RA	PRP	04/10/92	1 1997	1 1997
6	LA	Combustion, Inc.	Denham Springs	01	RI/FS	PS	10/25/88	1 1996	2 1996
6	LA	i Louisiana Army Ammunition Plant	Doyline	02 03	RI/FS RI/FS	FF FF	01/31/89 09/30/93	4 1995 4 1995	2 1996 4 1996
6	LA ·	Old Citgo Refinery (Bossier City)	Bossier	01	RI/FS	F	09/22/94	4 1996	4 1996
6	LA	Old Inger Oil Refinery	Darrow	01	RA	s	04/25/86	2 1999	2 1999
6	. LA	Petro-Processors of Louisiana, Inc.	Scotlandville	. 01	RA	PRP	06/30/87	4 1997	4 1998
6	EA	Southern Shipbuilding	Slidell	01	RI/FS	F	06/24/94	1 1995	4 1995
6	NM	AT & SF (Clovis)	Clovis	01	RA	PRP	08/07/89	4 1998	4 1998
· <b>6</b>	NM	AT&SF (Albuquerque)	Albuquerque	01	RI/FS	PRP	06/06/94	4 1995	2 1996
6	NM	Cal West Metals (USSBA)	Lemitar	01	RA	F	09/29/93	2 1995	4 1995
6	NM	Cimarron Mining Corp.	Carrizozo	01 02	RA RA	EP ·	08/13/91 12/20/91	1 1995 2 1995	2 1996 2 1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	ACTIVITY	LEAD	FUNDING START	CO	EVIOUS MPLETION HEDULE	CO	ESENT MPLETION HEDULE
6	NM	Lee Acres Landfill (USDOI)	Farmington	01	RI/FS	FF -	02/25/92	1	1996	1	1996
6	NM	Prewitt Abandoned Refinery	Prewitt	7 01 01	RA RA	PRP PRP	01/16/95 01/16/95			4	1996 1996
6	NM	South Valley	Albuquerque '	06	RA	PRP	06/18/95		`	1.	1997
6	NM	United Nuclear Corp.	Church Rock	01	RA	PRP	09/12/89	4	1995	2	1996
6	OK	Double Eagle Refinery Co.	Oklahoma City	02	RA	F	07/17/95			4	1996
6	OK	Fourth Street Abandoned Refinery	Oklahoma City	01 02	RA RA	F F	09/20/94 07/17/95	1	1996	3 4	1996 1996
6 ·	OK	National Zinc Corp.	Bartlesville ,	01	RA	PS	03/15/94			4	1997
6	OK	Rab Valley Wood Preserving	Panama	01	RI/FS	F	09/27/94	4	1995	4	1996
6	OK	Sand Springs Petrochemical Complex	Sand Springs	01	RA	PRP	09/16/94	4	1996	4	1996
6	OK	Tar Creek (Ottawa County)	Ottawa County	02 02	RI/FS RI/FS	F	08/25/94 08/25/94			4	1996 1997
6	OK	Tenth Street Dump/Junkyard	Oklahoma City	01	RA	F	09/28/94	1	1996	2	1996
6	TX	ALCOA (Point Comfort)/Lavaca Bay	Point Comfort	01	RI/FS	PRP	03/31/94	2	1997	2	1997
6	ТX	Air Force Plant #4 (General Dynamics)	Fort Worth	01	RI/FS	FF	08/20/90	4	1995	2	1996
6	TX	Bailey Waste Disposal	Bridge City	01	RA	MR	02/19/92	.3	1996	3	1997
6	ŤΧ	Brio Refining Co., Inc.	Friendswood	01	RA .	PRP	06/29/89	2	1997	4	1998
6	TX	Crystal Chemical Co.	Houston	. 01	RA	PRP	01/03/95			2	1996

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RG .	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	COF	VIOUS PLETION EDULE	COM	SENT PLETION EDULE
. 6	ΤX	French, Ltd.	Crosby	. 02	RA ·	PRP	06/28/89	3	1998	3	1998
6	ТX	Geneva Industries/Fuhrmann Energy .	Houston	02	RA	S	03/31/89	4	1999	4	1999
6	ТX	Lone Star Army Ammunition Plant	Texarkana	01 02	RI/FS RI/FS	FF FF	06/18/90 06/18/90	4	1996 1996	1	1997 1997
6	TX	Longhorn Army Ammunition Plant	Karnack	01 02 03 03 04 05	RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF	10/16/91 10/16/91 10/16/91 10/16/91 10/16/91	4 2 3 2 3 2	1995 1997 1995 1997 1995	1 2 4 2 2 2	1996 1997 1995 1997 1997
6	ТX	MOTCO, Inc.	La Marque	06 01 02	RI/FS RA RA	FF PRP PRP	10/16/91 12/31/88 12/13/93	1 3 3	1997 1996 1996	1 1 1	1997 1997 1997
. 6	ТX	North Calvacade Street	Houston	01 02	RA RA	s s	09/12/91 09/03/93	. <b>3</b> . 1	1996 1998	4	1999 1998
6	TX	Odessa Chromium #1	Odessa	02	RA	S	09/27/89	2	1998	2	1998
6	ТX	Odessa Chromium #2 (Andrews Highway)	Odessa	02 03	RA RA	S PRP	03/30/90 04/18/93	2	1997 1998	2	1997 1998
6	ΤX	RSR Corp.	Dallas	02 03 05	RI/FS RI/FS RI/FS	PRP F	08/09/93 07/17/93 05/10/93	2 3 3	1995 1995 1995	4 2 2	1995 1996 1996
6	TX	Sikes Disposal Pits	Crosby	01	RA	s	05/04/89	3	1996	4	1996
6	TX	Sol Lynn/Industrial Transformers	Houston	02	RA	s	09/10/91	4	1999	4	2004
6	ТX	South Cavalcade Street	Houston	01	RA .	PRP	01/11/95			4	1999

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RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	CC	ESENT MPLETION HEDULE
6	ТX	Texarkana Wood Preserving Co.	Texarkana	01	RA	s	05/21/93	4 1999	4	1999
6	٠πх	United Creosoting Co.	Conroe	03 03	RA RA	s s	09/17/93 09/17/93	4 · 1997 2 · 1998	4 1	2000 1999
7	IA	Des Moines TCE (once listed as DICO)	Des Moines	02 04	RI/FS RI/FS	E*	10/26/94 10/26/94		1 4	1996 1995
7	IA	Fairfield Coal Gasification Plant	Fairfield	02	RA	PRP	07/20/92		4	2001
7	IA	Iowa Army Ammunition Plant	Middletown	01	RI/FS	FF	09/20/90	4 1996	4	1997
7.	IA	Mason City Coal Gasification Plant	Mason City	01	RI/FS	PRP	10/01/91	4 1996	3	1997
7	IA	Midwest Manufacturing/North Farm	Kellogg	02	RA	PRP	08/03/95		4	1997
7	IA	Peoples Natural Gas Co.	Dubuque	01	RA	PRP	03/29/94	4 1996	4	1997
7	IA	Ralston	Cedar Rapids	01	RI/FS	PRP	11/27/91		3	1997
7	IA	Vogel Paint & Wax	Orange City	01	RA	PS	05/20/91	2 1997	2	1997
7	IA	Waterloo Coal Gaasification Plant	Waterloo	01 .	RI/FS	PRP	05/30/95		1	1998
7	KS	29th & Mead Ground Water Contamination	Wichita	01	RI/FS	PS	09/27/89	4 1995	4	1997
7	KS	57th and North Broadway Streets Site	Whichita Heigths	01	RI/FS	F .	09/15/94	4 1996	2	1999
7	KS	Cherokee County (Tar Creek, Cherokee County)	Cherokee County	03 07	RI/FS FS	PRÞ F	05/07/90 08/23/95		4	1995 1996

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RG.	ST	SITE NAME	LOCATION	OPER- ABLE Unit	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
7	KS	Doepke Disposal (Holliday)	Johnson County	01	RA	PRP	03/06/95		4 1998
7	KS	Fort Riley	Junction City	01 02 03	RI/FS RI/FS RI/FS	FF FF FF	08/23/90 01/22/92 07/01/93	3 1995 3 1996 4 1996	2 1996 3 1996 4 1996
7	KS	Fourth & Carey Site	Hutchinson	01	RI/FS	PS	05/03/94	4 1996	2 1997
7	KS	Obee Road	Hutchinson	02	RI	F	09/30/94		4 2000
7	KS	Pester Refinery Co.	El Dorado	01 02	RA RI/FS	PS PS	11/01/94 12/16/93	4 1996	2 1997 · 4 · 1996
7	MO	Bee Cee Manufacturing Co.	Malden	01	FS	S	09/03/93	-	3 1995
7	MO	Kem-Pest Laboratories	Cape Girardeau	02	RA	F	02/10/93	4 1996	4 1996
7	MO	Lake City Army Ammunition Plant (Northwest Lagoon)	Independence	01 . 02 03 04	RI/FS RI/FS RI/FS RI/FS	FF FF FF	08/01/87 04/21/92 06/27/90 09/30/92	1 1999 4 1996 4 1996 3 1999	1 1999 4 1996 1 1998 3 1999
7	MO	Lee Chemical	Liberty	01	. RA	PS	12/31/92	1 1995	4 1999
7	МО	Oronogo-Duenweg Mining Belt	Jasper County	01 <sup>.</sup> 01	RI/FS RI·	MR F	08/02/91 04/24/90		3 1997 4 1995
7	МО	Solid State Circuits, Inc.	Republic	01	RA	PS	09/27/91	2 1994	4 2034
7	МО	St. Louis Airport/Hazelwood Interim Storage/Futura Coat	St. Louis County	<b>01</b>	R1/FS	PRP	06/26/90	1 1996	1 1997
7	МО	Syntex Facility	Verona	01	RA	PRP	09/30/89	4 1995	4 1996
, <b>7</b>	МО	Times Beach Site	Times Beach	02	RA	PRP	09/30/94	1 1996	1 1996
<b>7</b>	МО	Weldon Spring Quarry (USDOE/Army)	St. Charles County	01 03 03 05 06	RA RA RA RI/FS RI/FS	FF FF FF FF	04/10/95 06/19/95 04/15/95 10/24/91 05/18/95	4 1996	3 1996 2 1996 1 1996 4 1997 4 1998

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RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETI SCHEDULE	ON	PRESENT COMPLETION SCHEDULE
7	МО	Weldon Springs Ordnance Works	St. Charles County	01	RI/FS	FF	02/16/90	2 1995		2 1996
7	МО	Westlake Landfill	Bridgeton	01 02	RI/FS RI/FS	PRP PRP	03/03/93 12/14/94	4 1996		4. 1996 3 1998
7	NE	Bruno Co-op Association/Associated Prop	Bruno	01	RI/FS	PRP	05/17/94			4 1996
. <b>7</b>	NE	Cleburn Street Well	Grand Island	01	RI/FS	F	09/16/91	1 1995		1 1996
7	NE	Cornhusker Army Ammunition Plant	Hall County	01 02	RI/FS RI/FS	FF FF	03/15/90 12/01/94	1 1997		4 1997 1 1996
7	NE	Hastings Ground Water Contamination	Hastings	05 12 14 15 16	RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS	F F PRP PRP PRP F	09/30/93 08/31/90 09/30/91 07/19/95 02/11/91 03/22/85	4 1996 1 1996 2 1996 2 1996 3 1999		4 1997 4 1997 1 1997 4 1997 4 1997 3 1997
7	NE	Nebraska Ordnance Plant (Former)	Mead	02 03	RI/FS RI/FS	PRP PRP	08/18/92 02/08/95	2 1996		3 1997 4 1996 3 1998
<b>۲</b>	NE	Ogaliala Ground Water Contamination	Ogallala	01	RI/FS	F	09/29/94	1 1996		4 1997
8	co	Air Force Plant PJKS	Watertown	01	RI/FS	FF	02/07/89	4 1999		4 1999
8	СО	Broderick Wood Products	Denver	02	RA ·	PRP	05/01/95	•		4 1996
	co	California Gulch	Leadville	00 00 02 02 03 04 05 05 05	RI/FS FS RI/FS RI/FS RI/FS RI/FS RI RI RI	F PRP PRP F PRP EP PRP PRP PRP	06/12/92 04/07/94 04/07/87 08/26/94 08/26/94 08/26/94 08/29/91 09/16/93 08/26/94	1 1995 2 1996 1 1995		1 1995 2 1996 1 1995 1 1996 4 1995 3 1996 2 1996 1 1995 2 1995 3 1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	ON COM	SENT PLETION EDULE
•		•	·	07 08 08 09 09 09 10	RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS	PRP PRP PRP PRP PRP F PRP	08/26/94 04/08/93 08/26/94 09/15/94 08/26/94 08/26/94 08/28/94 04/08/93		2 4 4 3 4 1 2 4	1996 1995 1996 1996 1996 1996 1996
8	CO	Central City - Clear Creek	Idaho Springs	03 03 03 03	RA RA RA RA	F S S	09/30/92 09/29/93 09/29/93 09/29/93		4 3 2 2	1996 1998 1997 1997
8	СО	Chemical Sales Co.	Commerce City	02 03	RA RA	F ·	04/25/95 03/23/95		1 1	1996 1996
8	CO	Denver Radium Site	Denver	08 09	RA RA	PRP F	03/31/93 06/04/92	3 1995 2 1995	4 2	1996 1996
8.	CO	Eagle Mine	Minturn/Redcliff	01 02	RA FS	PS F	09/01/88 09/01/92	1 1996	4 3	1996 1996
8	co	Lincoln Park	Canon City	01	FS	F	03/11/92	4 1994	4	1996
	CO	Rocky Flats Plant (USDOE)	Golden	01 02 02 03 04 05 06 07 08 09 10 11 12 13	RI RA RI RI RI RI RI RI RI RI RI	FF FF FF FF FF FF FF FF FF FF FF	02/06/90 09/11/92 04/12/90 07/10/91 06/08/90 04/05/91 04/19/91 06/08/90 05/01/92 06/08/90 11/26/91 06/08/90 05/08/92 05/15/92 06/26/92 05/27/92	2 1996 4 1995 4 1995 3 1995 4 1999 1 1996 4 1999 3 1996 4 1999 4 1999 4 1999 4 1999 4 1999 4 1999	44434414331444	1996 1995 1995 1995 1995 1999 1996 1996

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RG	· ST	SITE NAME	LOCATION	OPER- ABLE Unit	ACTIVITY	LEAD	FUNDING Start	CO	EVIOUS MPLETION HEDULE	CC	RESENT OMPLETION CHEDULE
	•			16	RI	FF	09/24/91	4	1999	4	1999
8	CO	Rocky Mountain Arsenal	Adams County	02	ŔI	FF ·	10/27/87	4	4005	_	•
		•	•	. 03	RI/FS	FF	02/15/85	1	1995	1	1995
			,	04	RI/FS	FF	02/15/85	2	1996	2	1996
				15	RA	FF		3	1995	2	1996
			•	25	RA	FF	01/01/90	2	1998 、	2	1998
				26	RA	FF	03/21/91	2	1997	2	1996
				26	RA	FF	11/15/91	2	1995	4	1996
				26	RA_	FF	07/15/93	4	1995	4	1995
				26	RA _	FF FF	04/14/94	4	1995	2	1996
		•		28	RA	FF	05/01/94	4	1995	4	1995
	-				W	гг	02/05/93			3	1996
8	CO	Smuggler Mountain	Pitkin County	, 02	RA	PRP	04/14/95			2	1996
8	CO	Summitville Mine	Rio Grande	00	D1 /C0	****	,				
			· County	00 .	RI/FS	MR*	05/11/93	1	1996	· 4	1998
		•		01	RA	F	06/07/95			2	1997
		•		02	RA	F	06/07/95			4	1999
	•	•		03	RA	F	06/07/95			4	2003
_			······································	03	FS	F	09/21/94	4	1995	1	1996
8	MT	Anaconda Co. Smelter	Anaconda	04	RI/FS	PRP	09/30/94	3	1996		4007
		•	•	07	RA	PRP	05/19/94			3	1997 .
			•	11	RA	PRP	06/10/93	3 2	1998	3	1998
		•		14	RI	PRP	09/28/88	2	1996	4.	1996
		• •		16	RI/FS	PRP			4004	3	1997
					K1713	FRF	09/30/94	1	1996	3	1996
8	MT	East Helena Site	East Helena	01	RA <sup>.</sup>	PRP	03/31/92	7	4000		
		•		02	RI/FS	PRP		3	1999	3	1997
		•		03	RI/FS		06/23/87	1	1998	1	1998
_					KI/F3	PRP	06/27/87	3	1996	1	1998
8	MT	Idaho Pole Co.	Bozeman	01	RA	PRP	06/29/95		•	1	1997
8	MT	Libby Ground Water Contamination	Libby	02	RA	PRP	10/18/89	4	1999	4	1999
8	MT	Milltown Reservoir Sediments	Milltown	02							
			FITCLOWII	02 -	FS	PRP	02/02/90			1	1997
				02		PRP	02/02/90			4	1996
				03	RI/FS	PRP	07/07/95			2	1998

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09/30/91 06/30/92 08/02/91 06/30/92 05/18/94 05/11/92	2 1 4	1997 1997	1 2 1 1	1996 1997 1996 1998 1997
05/18/94			1	
	4	1000		
12/11/92		1777	4	1999
04/12/03	4	1996	4	1996 1996
04/05/93	2	1997	2	1997
	4	1996 1997		1996 1997
01/24/92 04/05/93	3 2	1996 1997	3	1996 1997
04/05/93	2	1997 1997	2	1997 1997
01/26/93	1	1997	1	1997 1998
01/26/93	1	1997	i	1997
06/28/91	3	1996	2	1997
01/30/92		•	4	1995 1996
	3	1996	3 3	1998 1996
09/10/92 05/03/95	1	1997	1	1997 1999
09/22/93 09/22/93			3 4	1996 1995
09/22/93 07/29/94	4	1996	3	1996 1997
09/07/95			4	1996
06/22/92	1	1994	1	1994
07/31/93 08/01/95	5	1994	1 3	1996 1996
05/21/95			4	1996 1996
	04/12/93 04/05/93 01/24/92 04/05/93 01/26/93 01/26/93 01/26/93 01/26/93 02/03/94 01/26/93 06/28/91 01/30/92 09/14/95 08/13/91 09/10/92 05/03/95 09/22/93 09/22/93 09/22/93 07/29/94 09/07/95 06/22/92 07/31/93 08/01/95	04/05/93 2 04/12/93 4 04/05/93 2 01/24/92 3 04/05/93 2 01/26/93 1 01/26/93 1 02/03/94 1 01/26/93 1 06/28/91 3 06/28/91 01/30/92 09/14/95 08/13/91 3 09/10/92 1 05/03/95 09/22/93 09/22/93 09/22/93 09/22/93 07/29/94 4 09/07/95 06/22/92 1 07/31/93 3 08/01/95 05/21/95	04/05/93 2 1997 04/12/93 4 1996 04/05/93 2 1997 01/24/92 3 1996 04/05/93 2 1997 04/05/93 2 1997 01/26/93 1 1997 01/26/93 1 1997 02/03/94 1 1998 01/26/93 1 1997 06/28/91 3 1997 06/28/91 3 1997 06/28/91 3 1996 06/28/91 3 1996 09/14/95 08/13/91 3 1996 09/10/92 1 1997 05/03/95 09/22/93 09/22/93 09/22/93 09/22/93 09/22/93 09/22/93 09/22/93 09/07/95 06/22/92 1 1994 07/31/93 3 1994 08/01/95 05/21/95	04/05/93

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	CO	EVIOUS MPLETION HEDULE	CO	ESENT MPLETION HEDULE
			•	03	RI/FS	FF	05/31/91	1	1998	1	1998
8	UŢ	Monticello Radioactively Contaminated Properties	Monticello	01 02	RA RA	PRP FF	09/06/84 11/09/90	1	1996 1997	1 4	1997 1997
				03 05	RA RA	PRP FF	11/23/93 01/07/94	3	1996 1998 \	4	1997 1997 1999
8	UT	Petrochem Recycling Corp./Ekotek Plant	Salt Lake City	01	RI/FS	PRP	07/10/92	3	1995	1	1996
8	UT	Portland Cement (Kiln Dust 2 & 3)	Salt Lake City	01 03	RA RI/FS	S F	04/03/95 10/24/94			1 2	1997 1996
8	UT	Richardson Flat Tailings	Summit County	01	RI/FS	PRP	09/29/89			1	1997
8	UT	Sandy Smelter Site	Sandy	00 01	RI/FS FS	F F	11/15/93 11/15/93	1	1995 1995	4	1995 1995
8	UT	Sharon Steel Corp. (Midvale Tailings/Smelters)	Midvale	01 02 02	RA RA RA	S S S	05/18/95 09/20/94 09/29/95	· 1	1997	4 2 2	1997 1996 1997
8	UT	Tooele Army Depot (North Area)	Tooele	01 01	RI/FS RI/FS	FF FF	08/16/90 12/31/91	,		1	1995 1998
				02 03 04	RI/FS RI/FS RI/FS	FF FF	12/31/91 11/01/94 07/15/93	3	1997 1996	2 3 1	1998 1998 1998
			\$ ""	08 09 10	RI/FS RI/FS RA	FF FF FF	03/19/93 01/02/92 08/29/95	3	1996	1 1 2	1998 2001 1996
8	UT	Utah Power & Light/American Barrel Co.	Salt Lake City	01 01	RA RA	PRP PRP	07/23/94. 09/18/95	2	1995	2 2	1996 1996
8	UT .	Wasatch Chemical Co.	Salt Lake City	01 01	RA RA	PRP PRP	09/10/93 10/11/94	4 -	1995	1	1996 1996

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<u>RG</u>	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	COMP	IOUS LETION DULE	COM	SENT PLETION EDULE
8	WY	F.E. Warren Air Force Base	Cheyenne	02 03 06 07 08 09	RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF FF	01/06/94 01/25/93 03/09/94 03/23/94 01/01/94 01/01/94	3 1 2 2 3	1997 1995 1997 1997 1996 1996	3 3 1 2 2 3 1	1997 1995 1997 1997 1996 1996
9	AZ	Hassayampa Landfill	Hassayampa	01	RA	PRP	07/21/95			3	1997
9	AZ	Indian Bend Wash Area	Scottsdale/Impe/Phnx	01 03 06 06 07 07	RA RI/FS RA RA RI RA	PRP F PRP PRP F	02/20/92 03/14/88 02/08/94 07/11/94 09/26/90 05/31/95	4 4 4	1995 1995 1996 1996 1997	1 3 1 1 4	1996 1996 1997 1997 1997 1995
9	AZ	Luke Air Force Base	Glendale	01 02	RI/FS <sup>-</sup>	FF FF	09/27/90 04/10/95	3	1996	3	1997 1999
9	AZ	Nineteenth Avenue Landfill	Phoenix	01 -	RA	PS	05/11/95			3	1997
9	AZ	Phoenix-Goodyear Airport Area	Goodyear	01	RA	PRP	09/30/94	1 .	1996	2	1996
9	AZ ·	Tucson International Airport Area	Tucson .	01 02	RA RI/FS	PRP PRP	12/12/91 12/11/90		1995 1996	1	1996 1997
9	AZ	Williams Air Force Base	Chandler	01 02 03 04 05	RA RA RI/FS RI/FS RI/FS	FF FF FF FF	03/09/95 12/31/92 01/19/93 07/31/95 09/01/93	2	1996 1996 1996	4 2 1 3	1996 1996 1996 1998 1996
9	AZ	Yuma Marine Corps Air Station	Yuma	01 02	RI/FS RI/FS	FF FF	09/30/91 09/30/91		1996 1997	3 2	1997 1997

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				OPER- ABLE	,		FINNTHO		EVIOUS		ESENT
RG	ST	SITE NAME	LOCATION	UNIT	ACTIVITY	LEAD	FUNDING START		MPLETION HEDULE		MPLETION HEDULE
9	CA	Aerojet General Corp.	Rancho Cordova	01	RI/FS	PRP	09/08/88	4	1996	4	1999
9	CA	Atlas Asbestos Mine	Fresno County	01	RA	PRP	06/22/94	2	1996	2	1996
9	CA	Barstow Marine Corps Logistics Base (Nebo Area)	Barstow	01 02	RI/FS	FF	09/28/90	3	1996	1	1997
				03	RI/FS RI/FS	FF FF	09/28/90 09/28/90	2	1996 、 1997	1	1997 1998
9	CA	Brown & Bryant, Inc. (Arvin Plant)	Arvin	02	RI/FS	F	09/30/92	2	1997	3	1998
9	CA	Camp Pendleton Marine Corps Base	San Diego County	01	RI/FS	FF	09/28/90	1	1996	1	1996
• .	•		Country	02 03	RI/FS RI/FS	FF FF	09/28/90 09/28/90	3 4	1996 1996	1	1997 1998
9	CA	Castle Air Force Base	Merced	01	RI/FS	FF	07/21/89	1	1996	2	1996
	٠		•	02 03	RA RA	FF FF	01/04/93 11/12/93	4	1999 1999	4	1999 1999
9	CA	Cooper Drum Co.		04	RI/FS	FF	12/16/92	2	1996	2	1996
9	CA		South Gate	01	RI/FS	F.	08/12/93	1	1997	1	1997
9	CA	Crazy Horse Sanitary Landfill	Salinas	01	RI/FS	EP	09/18/93	4	1995	1	1996
7	UM	Del Amo Facility	Los Angeles	01 02	RI/FS ·RI/FS	MR PRP	05/07/92 05/07/92	2	1996 1996	2	1997 1997
9	CA	Edwards Air Force Base	Kern County	01	RI/FS	FF	09/26/90	4	2004	4	2004
•		•		02 03 .	RI/FS RI/FS	FF FF	09/26/90 12/18/92	2 1	1997 1999	2 1	1997 1999
			•	05 07	RI/FS RI/FS	FF FF	06/21/94 06/03/94	4	1999	2 4	2001 1999
9	CA	El Toro Marine Corps Air Station	El Toro	01	RI/FS	FF	09/28/90	2	1996	3	1997
		•	•	02 03	RI/FS RI/FS	FF FF	09/28/90 09/28/90	3 3	1996 1996	4	1997 1999
		•		04 · 05	RI/FS ·RI/FS	FF FF	09/28/90 09/28/90	3	1996	4	1997 1997

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RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	ACTIVITY	LEAD	FUNDING START	COM	VIOUS PLETION EDULE	COM	SENT PLETION EDULE
9	CA	Fairchild Semiconductor/Camera & (South San Jose Plant)	South San Jose	02	RA	PRP	04/04/95			3	1997
9	CA	Fort Ord	Marina	01	. RI/FS	FF	07/23/90	3	1997	3	1997
		•		02	RA	FF	09/29/95			4	1999
				04	RA	FF	09/02/94	1	1995 .	1	1996
			•	,04	RA	FF	06/19/95			4	1996
				04	RA	FF	06/21/95			4	1996
				04	RA .	FF	06/26/95			4	1996
				04	RA	FF	06/26/95			4	1996
				04	RA	FF	. 07/05/95			4	1996
				04	RA	FF	07/10/95			4	1996
			-	04	RA	FF	07/10/95			4	1996
				04 .	RA	FF	07/26/95			4	1996
				06	RA	FF	08/01/95			4	1996
9	CA	Frontier Fertilizer	Davis	00	RI/FS	F	08/02/93			3	1997
9	CA	GBF, Inc., Dump	Antioch	01	RI/FS	PS	07/28/93	1	1996	1	1996
_		Atu Basa Basa	Vieterville	02	RI/FS	FF	09/21/90	4	1999	4	1999
9	CA	George Air Force Base	Victorville	03	RI/FS	FF	08/27/91	2	1996	2	1996
		·		U3	K1/F3 .	rr	00/21/71	-			
9	CA	Hunter's Point Annex	San Francisco	01	RI/FS	FF	09/28/90	4	1995	2	1996
,	U/L	· ·		02	RI/FS	FF	09/28/90	3	1996	3	1997
				03	RI/FS	FF	09/28/90	4	1996	1	1998
				04	RI/FS	FF -	10/01/90	1	1997	4	1997
		·		05	RI/FS	FF	01/22/91	2	1997	3	1998
9	CA	Industrial Waste Processing	Fresno	.01	RI/FS .	PRP	05/12/93		•	1	1997
. 9	CA	Intel Corp. (Mountain View Plant)	Mountain View	<b>02</b>	RA 	PRP	04/17/95			2	1998
						-	00/33/0/			1	1996
9	CA	Iron Mountain Mine	Redding	03 04	RA Ri/FS	F F	08/23/94 04/21/94	.3	1996	3	1996
					•						

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING Start	CO	EVIOUS MPLETION HEDULE	CO	SENT PLETION FEDULE
9	CA	J.H. Baxter & Co.	Weed	01 01	RA FS	PRP F	07/16/92 08/04/95	3	1996	1 4	1997 1996
9	CA	Jet Propulsion Laboratory (NASA)	Pasadena	01 02 03	RI/FS RI/FS RI/FS	FF FF FF	12/23/92 07/07/93 04/29/94	3 3 4	1996 1996 1996	3 3 4	1996 1996 1996
9	CA	Koppers Co., Inc. (Oroville Plant)	Oroville	01	RA	PRP	-09/17/93	1	1996	1	1997
9	CA	LEHR/Old Campus Landfill (USDOE)	Davis	01	RI/FS	FF	09/30/94		-	4	1997
9	CA	Lawrence Livermore National Laboratory	Livermore	01 03 04 05 06	RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF	06/29/92 06/29/92 06/29/92 06/29/92 06/29/92	1 4 1 4 2	1997 1996 1998 1997 1997	1 4 1 4 2	1997 1996 1998 1997 1997
9	CA	Lawrence Livermore National Laboratory (USDOE)	Livermore	01	RA	FF	08/05/92	1	2000	1	· 2000
<b>9</b>	CA	March Air Force Base	Riverside	01 02 03 04	RI/FS RI/FS RI/FS RI/FS	FF FF FF	09/27/90 09/27/90 08/06/91 01/24/92	1 1 1 3	1997 1995 1996 1997	1 1 1 3	1997 1996 1996 1997
9	CA	Mather Air Force Base (AC & W Disposal Site)	Sacramento	01 03 04	RI/FS RA RI/FS	FF FF FF	06/06/91 , 06/21/94 09/19/95	1 1	1996 1996	1 1 1	1996 1996 1998
9	CA	McClellan Air Force Base (Ground Water Contamination)	Sacramento	01 04 05 06 08 09	RA RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF FF	05/11/95 07/21/89 08/21/90 11/23/92 01/13/93 07/21/89	1 1 3 3 3	2001 2001 1996 1996 1996	2 1 1 3 2 2	1998 2001 2001 1996 1997

#### APPENDIX A

			•		OPER-	•			PREVIOUS		ESENT
R	G S	T	SITE NAME	LOCATION	ABLE Unit	ACTIVITY	LEAD	FUNDING START	COMPLETION SCHEDULE		MPLETION HEDULE
•	9 C	A	McColl	Fullerton	01 04	RA RI/FS	. S PRP	06/11/84 02/04/94	4 1991	. 4	1991 1996
ç	9 C	A.	McCormic and Baxter Creosoting Co.	Stockton	01- 03	RI/FS RI/FS	F F	06/30/92 09/28/94	2 1997	2	1997 1997
9	9 C	A	Modesto Ground Water Contamination	Modesto	01	RI/FS	F ,	03/21/91	2 . 1995	3	1996
	9 <sub>.</sub> C	:A	Moffett Naval Air Station	Sunnyvale	01 02 05 06 06	RI/FS RA RI/FS RI/FS RI	FF FF FF FF	08/08/89 06/13/94 08/08/89 08/08/89 07/06/92	1 1996 1 1996 4 1996 4 1995	4 3 4 2 1	1996 1996 1996 1997 1996
9	9 C	A	Monolithic Memories	Sunnyvale	01	RA	PS	09/11/91	1 1995	1	1996
ę	9 C	A	Montrose Chemical Corp.	Torrance	01	RI/FS	PRP	10/10/86	1 1996	4	1996
9	9 C	A	National Semiconductor Corp.	Santa Clara	01	RA	PS	09/11/91	3 1995	2	1996
9	9 ·C	CA	Newmark Ground Water Contamination	San Bernadino	01 03	RA RI/FS	F F	09/18/95 02/09/94	1 1997	4 1	1997 1997
9	9 C	A	Norton Air Force Base	San Bernardino	01	· RA	FF	09/16/94	4 1995	1	1996
9	9 . C	A	Operating Industries, Inc., Landfill	Monterey Park	01 04	RI/FS RA	F PRP	09/15/89 05/11/89	1 1997	1	1997 1997
•	9 C	CA	Pacific Coast Pipe Lines	Fillmore	01	RA	PRP	12/29/94		4	1996
. (	9 C	CA	Ralph Gray Trucking Co.	Westminster	02	RI/FS	F	06/19/93	1 1996	1	1997
•	9. C	CA	Raytheon Corp.	Mountain View	02	RA	PRP	02/28/95		1	1998
•	9 0	CA	Riverbank Army Ammunition Plant	Riverbank	01	RA ·	FF	06/05/95		1	1996

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RG	ST	CITE NAME		OPER- Able			FUNDING		EVIOUS MPLETION		ESENT MPLETION
Ku	31	SITE NAME -	LOCATION	UNIT	ACTIVITY	LEAD	START	SCI	<u>IEDULE</u>	SC	HEDULE
9	CA	Sacramento Army Depot	Sacramento	02 05	RA RA	FF FF	02/16/90 04/08/94	4 2	2005 1996	4	2005 1996
9	CA	San Fernando Valley (Area 1)	Los Angeles	01 03	RI RA	PRP PRP	02/18/94 11/22/93	1 2	1995 1996	1 2	1996 1997
9	CA	San Fernando Valley (Area 4)	Los Angeles	02	RI/FS	F	09/28/92	4	1995 `	4	1996
9	CA	San Gabriel Valley (Area 1)	El Monte	00 01 05	RI/FS RI/FS RI/FS	F PRP PRP	06/13/84 03/16/95 07/25/95	1	1997	1 3 4	1997 1997 1997
9	CA .	San Gabriel Valley (Area 4)	La Puente	01	RI/FS	PRP	09/30/93	1	1997	1	1997
9	CA	Selma Treating Co.	Selma	01	RA	F	07/22/92	4	1996	4	1996
9	CA	Sharpe Army Depot	Lathrop	01 02	RA RI/FS	FF FF	05/30/95 03/16/89	1	1996	<b>3</b>	1996 1996
9	CA	South Bay Asbestos Area (Alviso Dumping Area)	Alviso	01	RA	PRP	10/15/93	1	1997	1	1997
9	CA	South Bay Basin	Silicon Valley	01	RI/FS	F	01/28/87	4	1991	4	1991
9	· CA	Stoker Company	Imperial	01	RI/FS	F	05/01/92	4	1996	4	1996 ·
, 9	CA	Stringfellow	Glen Avon Heights	05	RI/FS	F	10/01/90	4	1996	1	1997
9	CA	Sulphur Bank Mercury Mine	Clear Lake	01 02 03	RI/FS RI/FS RI/FS	EP F EP	09/28/90 11/18/91 09/28/90	2 3 2	1995 1996 1995	4 1 4	1996 1998 1996
9	CA	T.H. Agriculture & Nutrition Co. (Thompson-Haywood Chem	Fresno	01	RI/FS	PS	02/06/87	1	1995	1	1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	COM	VIOUS PLETION EDULE	CON	SENT PLETION EDULE
9	CA ·	Tracy Defense Depot	Tracy	01 02	RI/FS RA	FF FF	06/27/91 08/12/93	1 2	1997 1996	1	1997 1997
9	CA	Travis Air Force Base	Solano County	01 02 03 04	RI/FS RI/FS RI/FS RI/FS	FF FF FF	09/28/90 04/01/94 05/19/94 06/10/95	2 4 1	1997 1996 1998	2 4 1 2	1997 1996 1998 1998
9	CA	Watkins-Johnson Co. (Stewart Division)	Scotts Valley	01	RA	PRP	07/16/91	1	1995	1	1996
9	CA	Western Pacific Railroad Co.	Oroville	01	RI/FS	PŖP	03/15/94			3	1997
9	CA	Westinghouse Electric Corp. (Sunnyvale Plant)	Sunnyvale	<b>Q1</b>	RA	PRP	06/28/94	2	1996	2	1996
9	HI	Del Monte Corp. (Oahu Plantation)	Honolulu County	01	RI/FS	PRP	09/28/95			4	1997
9	HI	Peart Harbor Naval Complex Schofield Barracks	Pearl Harbor Oahu	01 02 03 04 05 06 07 08 10	RI/FS	FF FF FF FF FF FF FF	09/30/93 09/30/93 09/30/93 09/30/93 09/30/93 09/30/93 09/30/93 08/23/94 09/27/91	1 1 1 1 1 1 2 2	1999 1997 1998 1999 1999 1999 1999 1999	1 1 1 1 1 1 2 2	1999 1997 1998 1999 1999 1999 1999 1999
				02 03 04	RI/FS RI/FS RI/FS	FF FF	09/27/91 09/27/91 09/27/91	3	1997 1996 1997	3 1	1997 1996 1997
9	NV.	Carson River Mercury Site (Trust Territories PC)	Lyon/Churchill County	02	RI/FS	F.	09/28/90	3.	1996	1	1997

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	•			OPER:				PR	EVIOUS	D.D.	ESENT
RG	ST	SITE NAME	LOCATION	ABLE Unit	· ACTIVITY	LEAD	FUNDING START	CO	MPLETION HEDULE	CO	MPLETION HEDULE
10	AK	Arctic Surplus	Fairbanks	01	RI/FS	PRP	07/24/92	4	1995	4	1995
10	AK	Eielson Air Force Base	Fairbanks N Star	03	RI/FS	FF	05/06/92	4	1995	4	1995
		•	Borough ·	04	RI/FS	FF	05/06/92	4	1995	4	1995
			_	05	RI/FS	FF	05/06/92	4	1995	4	1995
				07	RI/FS	FF	05/21/91	2	1996	2	
				08	RA	FF	05/05/93	1	1996	1	1996 1996
10	AK	Elmendorf Air Force Base	Charten Analysis					•		•	
	****	Timeriaer i All Force pase	Greater Anchorage	03	RI/FS	FF	04/06/93 -	1	1996	1	1996
			Borough	06	·RI/FS	FF	01/18/94	4	1996	4	1996
			•	08	RA	FF	08/05/93	1	1996	1	1996
10	AK	Fort Richardson (USARMY)	Anchorage	01	RI/FS	FF	11/29/94			2	1997
10	AK	Fort Wainright	Fairbanks N Star	01	RI/FS	FF	08/10/94	2	1997	2	1997
			Borough	02 ·	RI/FS	FF	11/01/93	2	1996	2	1996
			_	03	RI/FS	FF	09/15/92	4	1995	4	1995
				04	RI/FS	FF	11/27/92	1	1996	1	
				05	RI/FS	FF	01/17/95	•	1770	3	1996 1997
10	AK	Standard Steel and Metals Salvage Yard	Anchorage	01	RI/FS	FF	09/26/92	3	1995	2	1996
10	ID	Blackbird Mine	Lemhi County	01	RI/FS	PRP	11/18/94		·	3	1998
10	ID	Bunker Hill Mining & Metallurgical	Smelterville	01	RA .		00 (07 (0)			_	
			OHICT COLATTIC	02	RA RA	PRP F	09/27/94 04/13/95	1	2002	1	2002 2000
10	ID	Eastern Michaud Flats Contamination	Pocatello	01	RI/FS	PRP	05/30/91	4	1996	4	1996
10	ID	Idaho National Engineering Lab	Idaho Falls	01 .	RI/FS	FF	12/20/91	1	1995	4	1995
		(USDOE)		02	RA	FF	02/11/94	4	1996	4	1996
				06	RI/FS	FF	04/01/95	7	1770	1	1997
			•.	07	RI/FS	FF	.03/17/95			1	1998
		•		08	RI/FS	FF ·	01/29/93	1	1996	1	1996
		•		18	RA	FF	12/07/94	•	1770	1	1997
		•		20	RI/FS	FF	07/10/95			4	1999
				24	RI/FS	FF	12/14/93	4	1996	4	1999
				25	RI/FS	FF	12/01/93	**	1770	-	
	•			26	RI/FS ·	FF	12/14/93			2	1996
					M1/13	FF	16/14/73			4	1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	CON	VIOUS PLETION EDULE	COM	SENT PLETION EDULE
10	ID	Kerr-McGee Chemical Corp. (Soda Springs Plant)	Soda Springs	01	RI/FS	PRP	09/20/90	4	1995	4	1995
10	10	Monsanto Chemcial Co. (Soda Springs Plant)	Soda Springs	01	RI/FS	PRP	03/19/91	1.	1996	2	1996
10	ID	Mountain Home Airforce Base	Mountain Home	03	ŔI/FS	FF .	05/12/92	3	1995	4	1995
10	ID	Union Pacific Railroad Co.	Pocatello	01	RA	PRP	05/19/94	1	1996	1	1996
10	OR	Fremont Nat. Forest Uranium Mines (USDA)	Lakeview	02	RI/FS	FF	10/17/94			2	1997
10	OR	Gould, Inc.	Portland	01	RA	PRP	03/02/92	4	1998	4	1998
10	OR	McCormick & Baxter Creos. Co. (Portland)	Portland	01	RI/FS	F	09/07/94	4	1995	2	1996
10	OR	Umatilla Army Depot (Lagoons)	Hermiston	01 02	RA RA	FF FF	02/15/94 06/20/94	1	1995 1996	. 1 . 3	1997 1998
10	WA	American Crossarm & Conduit Co.	Chehalis	01	RA	F	09/01/94	4	1996	4	1996
10	WA	Bangor Naval Submarine Base	Silverdale	02 06 07	RA RI/FS RA	FF FF FF	09/13/94 10/14/91 02/04/93	1 4	1995 1995	4 4	1999 1995 1995
10	WA	Bangor Ordnance Disposal	Bremerton	01	RA	FF	03/05/93	2	1996	. 5	1996
10	WA	Bonneville Power Administration Ross Complex	Vancouver	01	RA	FF	01/18/94	. 2	1995	4	1996
10	WA	Boomsnub/Airco	Vancouver	01	RI/FS	F	03/27/95			1	1997
10	WA	Colbert Landfill	Colbert	01	RA	MR	08/28/89	4	1998	4	1998

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				OPER-				PREVIOUS	DI	RESENT
RG	ST	SITE NAME	LOCATION	ABLE	ACTIVITY	1.540	FUNDING	COMPLETIC	N C	OMPLETION
	•		200/11.011	ONTI	VCIIATII	LEAD	START	SCHEDULE	S	CHEDULE
10	WA	Commencement Bay, Near Shore/Tide	Pierce County	04	RA	PS	11/12/91	3 4005		4007
		Flats		05	RA	PS		2 1995	1	1997
				06	RA		01/16/90	2 1996	2	1997
			,	07	RA RA	PS	12/17/93	2 1995	2	1997
				08		PS	04/11/91	1 1996	2	1997
				09	RA .	PS	09/30/89	4 1995	4	1996
					RA	PS	07/31/92	3 1995	. 1	1997
				11	RA	PRP	06/25/93	4 1996	4	1996
		•		19	FS	PRP	10/04/94		4	1996
				21	RA	PRP	06/25/92	2 1995	. 4	1995
				22	RA	PRP	12/21/93	4 1997	4	1997
10	WA	Commencement Bay, South Tacoma Channel	Tacoma	03	RA.	F	07/19/90	2 ~ 1995	1	1996
10	WA	Fairchild Air Force Base (4 Waste	Omeliana Omelia							
		Area)	Spokane County	01	RA ·	FF	03/16/93	3 1996	- 3	1996
		ni ca)		02	RA	FF '	03/07/94	1 1997	1	1997
				03	RI/FS	FF	. 09/15/92	3 1995	1	1996
10	WA	Fort Lewis Logistics Center	Tillicum	01	RA	FF	01/15/92	4 1995	3	1996
10	WA	Hamilton Island Landfill (USA/COE)	North Bonneville	01	RI/FS	FF	09/24/93	3 1995	3	1995
10	WA	Hanford 100-Area (USDOE)	Benton County	04	,					
		(00001)	Benton County	01	RA	FF	01/15/95		2	. 1996
				05	RI/FS	FF	04/09/90	2 1995	1	1996
			•	08	RI/FS	FF	10/12/90	2 1996	. 3	1997
		·		09.	RI/FS	FF	10/12/90	4 1995	3	1997
	,			1.1	RI/FS	FF	05/24/93	1 1996	2	1996
				12	RI/FS	FF	10/28/93	4 1995	2 `	.1996
			•	13	RI/FS	FF	06/30/93	4 1995	2	1996
				14	RI/FS	FF	04/15/91	4 1996	2	1997
10	WA	Hanford 200-Area (USDOE)	Benton County	01	RI/FS	FF	05/15/89	2 1995	2	1007
		•	,	02	RI/FS	FF	08/31/92		2	1997
				11	RI/FS	FF		2 1997	2	1997
				12	RI/FS		01/31/94	2 1997	2	1997
		•		14		FF	04/28/93	4 1996	3	1996
				14	RA .	FF	05/05/95	•	4	. 1996

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20		OTTE WANT	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	COM	VIOUS PLETION EDULE	COM	SENT PLETION EDULE
RG	ST	SITE NAME	LOCATION	- Citat	NOTITE !	Guito	9,7,11,1				
10	WA	Hanford 300-Area (USDOE)	Benton County	01 02	RI/FS RI/FS	FF FF	05/15/89 09/27/89	4 4	1995 1995	2	1996 1996
10 ·	WA	Harbor Island (Lead)	Seattle	07	RI/FS	·F	09/07/8 <u>8</u>	4	1995	. 2	1996
10	WA	Naval Air Station, Whidbey Island (Ault Field)	Whidbey Island	01 02 03 05	RA RA RA RI/FS	FF FF FF FF	08/15/94 01/10/95 04/14/95 07/14/94	4	1995	1 · 2 4 1	1996 1997 1996 1996
10	WA	Naval Undersea Warfare Engineering Stn. (4 Waste Area)	Keyport	01	RI/FS	FF	07/17/90	2	1995	1	1996
10	WA ·	Northwest Transformer (South Harkness St.)	Everson	01	RA	PRP	09/30/92	1	1,995	1	1997
10	WA	Old Navy Dump/Manchester Lab(USEPA/NOAA)	Manchester	01	RI/FS	FF	10/18/94			2	1997 ·
10	WA	Pacific Sound Resources	Seattle	01 02	RI/FS RI/FS	PRP F	09/29/94 05/18/95	4	1997	2	1998 1998 -
10	WA	Puget Sound Naval Shipyard Complex	Bremerton	01 02 03 04	RI/FS RI/FS RI/FS RI/FS	FF FF FF	10/31/92 01/26/94 07/31/94 10/09/92			3 3 4 3	1996 1997 1996 1996
10	WA	Tulalip Landfill	Marysville	01	RI/FS	PRP	08/12/93	4	1996	2	1997
10	WA	Vancouver Water Station #4 Contamination	Vancouver	01	RI/FS	F	. 04/02/92	3	1996	4	1997
10	WA	Woods Industry	. Yakima	01	RI/FS	PRP	06/28/90			2	1996
10	WA	Wycoff Co./Eagle Harbor	Bainbridge Island	02 04	RI/FS ·RA	F F	09/16/92 12/15/94	2	1996	3 1	1997 2000

# Appendix B Remedial Designs in Progress on September 30, 1995

This appendix lists the remedial designs in progress at the end of FY95 and their estimated completion schedule. Activities at multiple operable units, as well as first and subsequent activities, are listed.

- RG-EPA region in which the site is located.
- ST State in which the site is located.
- Site Name Name of the site, as listed on the National Priorities List (NPL).
- Location Location of the site, as listed on the NPL.
- Operable Unit Operable unit at which the corresponding remedial activity is occurring; a single site may include more than one operable unit.
- Lead The entity leading the activity, as follows:

**EP**: Fund-financed with EPA employees performing the project, not contractors;

**F**: Fund-financed and federal-lead by the Superfund remedial program;

FE: EPA enforcement program-lead;

FF: Federal facility-lead;

MR: Mixed funding; monies from both the Fund and potentially responsible parties (PRPs);

PRP: PRP-financed and conducted;

**PS**: PRP-financed work performed by the PRP under a state order (may include federal financing or federal oversight under an enforcement document);

S: State-lead and Fund-financed; and

SE: State enforcement-lead (may include federal financing).

Remaining terms used in the CERCLA Information System (CERCLIS) database, O (other), SN (state-lead and financed, no Fund money), and SR (state-ordered PRP response activities), are excluded from this status report because they do not include federal financing.

- Funding Start The date on which funds were allocated for the activity.
- Present Completion Schedule The quarter and fiscal year of the planned completion date for the activity, as of 9/30/95. This information was compiled from CERCLIS on 11/15/95.

## APPENDIX B

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	COM	SENT PLETION EDULE
1	CT	Laurel Park Inc. (once listed as Laurel Park Landfill)	Naugatuck Borough	02	PRP	04/24/91	2	1996
1	CT	Linemaster Switch Corp.	Woodstock	01	PRP	11/03/94	4	1996
1	MA	Charles-George Reclamation Trust Landfill	Tyngsborough	04	F	09/30/88	1	1996
1	MA	Fort Devens	Fort Devens	01	FF	09/26/95	1	1997
1	MA	Fort Devens - Sudbury Training Annex	Fort Devens	· 01	FF	09/29/95	. 4	1996
1	MA	Nyanza Chemical Waste Dump	Ashland	02 03	F F	04/08/92 07/27/93	2	1997 1997
1	MA	Otis Air National Guard Base/Camp Edwards	Falmouth	01	FF	09/25/95	3	1996
1	MA	Re-Solve, Inc.	Dartmouth	03	MR	03/30/89	2	1996
1	MA	Sullivan's Ledge	New Bedford	01 02	PRP PRP	03/15/91 04/05/93	4	1996 1996
1	MA	Wells G&H	Woburn	01	PRP	04/27/90	4	1998
1	ME	O'Connor Co.	Augusta	01	PRP	12/14/90	3	1996
1	NH	Auburn Road Landfill	Londonderry	02	PRP	09/30/90	2	1997
1	NH	Coakley Landfill	North Hampton	01	PRP	06/19/92	1	1996
1	NH	Dover Municipal Landfill	Dover	01	PRP	01/22/92	4	1996
1	NH	Ottati & Goss)	Kingston	03	F ·	09/20/90	2	1996
1	NH	Pease Air Force Base	Portsmouth/Newington	03 04 05 06 07 08	FF FF FF FF FF	09/30/94 09/26/95 06/26/95 09/18/95 09/26/95 01/30/95	1 1 1 1 2	1996 1997 1997 1997 1997 1996

APPENDIX B
STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1995

RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	LEAD	FUNDING Start	CON	SENT IPLETION IEDULE
				10	FF	08/09/95	1	1997.
1	NH	Savage Municipal Water Supply	Milford	01 02	S* PRP	09/30/93 04/28/94	1	1997 1997
1	NH	Tibbets Road	Barrington	01	PRP	11/07/94	2	1996
1	RI	Picillo Farm	Coventry	02	F	01/25/95	2	1996
2	ИJ	A. O. Polymer	Sparta Township	02	PRP	04/20/92	3	1996
2	NJ	Asbestos Dump	Millington	01	F	09/30/92	3	1995
2	NJ	Chemical Insecticide Corp.	Edison Township	03	F	05/30/95	1	1996
2	ИЛ	Chemical Leaman Tank Lines, Inc.	Bridgeport	01	PRP	01/03/91	1	1997
2	NJ	Combe Fill South Landfill	Chester Township	- 01	s	06/26/87	4	1994
2	NJ	Cosden Chemical Coatings Corp.	Beverly	02 03	F F	09/27/94 04/28/95	2 3	1996 1996
2	ЦИ	DeRenewal Chemical Co.	Kingwood Township	01 01	· F	09/30/89 09/30/89	4	1995 1998
2	NJ	Diamond Alkali Co.	Newark	01	PRP -	12/14/89	2	1996
2	NJ	Dover Municipal Well 4	Dover Township	01	F	07/06/93	1	1997
2	NJ	Ellis Property	Evesham Township	01 02	S S	06/30/93 09/30/93	4	1995 1997
2	NJ	Evor Phillips Leasing	Old Bridge Township	. 01	SE	05/02/94	2	1995
. 2	NJ	Ewan Property	Shamong Township	02	PRP	06/09/95	2	1997

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APPENDIX B

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE
2	NJ	Fried Industries	East Brunswick Township	01	F	09/30/94	1 1997
2	NJ	GEMS Landfill	Gloucester Township	01	S	· 05/22/86	3 1996
2	ИЛ	Glen Ridge Radium Site	Glen Ridge	03	F	09/26/90	1 1998
2	ИЛ	Global Sanitary Landfill	Old Bridge Township	01	· PS*	11/15/93	3 1996
2	NJ	Imperial Oil Co., Inc./Champion Chemicals	Morganville	01 02	S S	09/30/91 03/31/93	4 1996 4 1995
2	NJ	Metaltec/Aerosystems	Franklin Borough	02	F	03/29/91	3 1997
2	NJ	Montclair/West Orange Radium Site	Montclair/West Orange	03	<b>F</b> . ·	09/26/90	1 1998
2	NJ	Montgomery Township Housing Development	Montgomery Township	. 02	S	03/24/89	1 1997
2	NJ	Myers Property	Franklin Township	01	PRP	05/12/92	2 1998
2	NJ	Radiation Technology Inc.	Rockaway Township	01	S	08/31/94	2 1997
2	NJ	Reich Farms	Pleasant Plains	<b>02</b> ·	PRP	04/05/90	2 1997
2	ŊJ	Rockaway Borough Well Field	Rockaway Township	02	PRP	07/14/94	1 1997
2	NJ	Rockaway Township Wells	Rockaway	01	PS	04/20/94	4 1994
2	ИЛ	Rocky Hill Municipal Well	Rocky Hill Borough	01	s	03/24/89	1 1997
2	NJ	Roebling Steel Co.	Florence	03	F	09/25/91	<b>3</b> 1996 .
2	NJ	Sharkey Landfill	Parsippany/Troy Hills	01	PRP	10/18/94	2 1997
2	NJ	Swope Oil & Chemical Co.	Pennsauken	02	PŘP	06/07/93	4 1995

APPENDIX B

RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	LEAD	FUNDING Start	CON	SENT IPLETION IEDULE
. 2	NJ .	U.S. Radium Corp.	Orange	01 02	F F	09/30/93 09/29/95	4 2	1998 1997
2	NJ	Vineland Chemical Co., Inc.	Vineland	01 02	F F	09/30/89 10/02/89	- 2 1	1996 1997
2	NJ	Waldick Aerospace Devices, Inc.	Wall Township	02	F	06/28/91	1	1997
2	NJ	Woodland Route 532 Dump	Woodland Township	02	PS	08/30/90	3	1996
2	NJ	Woodland Route 72 Dump	Woodland Township	02	PS	08/31/91	3	1996
2	NY	Byron Barrel & Drum	Byron	01	PRP	09/25/90	1	1997
2	NY	Circuitron Corp.	East Farmingdale	02	F	02/01/95	4	1996
2	NY	Claremont Polychemical	Old Bethpage	. 01	F	09/30/92	4	1997
2	NY	Colesville Municipal Landfill	Town of Colesville	02	PS	04/01/91	2	1996
2	NY	Cortese Landfill	Vil. of Narrowsburg	01	PRP .	09/29/95	1	1997
2	NY	Facet Enterprises, Inc.	Elmira	01	PRP	05/25/93	1	1996
2	NY	GCL Tie & Treating Inc.	Village of Sidney	01 • 02	F F	05/17/95 05/17/95	1 4	1997 1996
2	NY	Genzale Plating Co.	Franklin Square	03	F	09/25/91	4	1994
2	NY	Haviland Complex	Town of Hyde Park	01 .	F	09/30/93	1	1997
2	NY	Hertel Landfill	Plattekill	01	PRP	11/23/92	2	1996
2	NY	Hooker (102nd Street)	Niagara Falls	01	PRP	10/22/91	. 3	1996
2	NY	Hooker (South Area)	Niagara Falls	01	PRP	12/15/94	4	1997
2	NY	Hooker Chemical/Ruco Polymer Corp.	Hicksville	01	PRP	12/28/94	4	1996

Progress Toward Implementing Superfund: Fiscal Year 1995

APPENDIX B

ne	ST	SITE NAME	LOCATION	OPER- ABLE Unit	LEAD	FUNDING START		SENT PLETION EDULE
RG 2	NY	Johnstown City Landfill	Town of Johnstown	02	. PS	12/19/94	4	1996
2	NY	Kentucky Avenue Well Field	Horseheads	02	PRP	08/29/91	3	1996
2	NY	Ludlow Sand & Gravel	Clayville	01	PS	11/12/89	2	1994
2	NY	Mattiace Petrochemical Co., Inc.	Glen Cove	04	F	09/30/92	4	1996
2	NY	Niagara County Refuse	Wheatfield	01	PRP	01/17/95	1	1997
2	NY	Pfohl Brothers Landfill	Cheektowaga	01	PS .	10/17/94	1	1996
2	NY	Port Washington Landfill	Port Washington	01	PRP	09/28/90	1	1997
2	NY	Robintech, Inc./National Pipe Co.	Тоып of Vestal	01	PRP ·	11/25/92	3	1996
2	NY	Rowe Industries Ground Water 'Contamination	Noyack/Sag Harbor	01	PRP	01/26/94	1	1996
2	NY	Solvent Savers	Lincklaen	01	PRP	07/02/91	1	1997
2	NY	Syosset Landfill	Oyster Bay	01	PRP	04/03/91	1	1996
2	NY	York Oil Co.	Oyster Bay	01	PRP	03/29/95	. 1	1999
2	PR	GE Wiring Devices	Juana Diaz	02	PRP	09/14/94	. 3	1995
2	PR	Juncos Landfill	Juncos	01	PRP	12/21/92	4	1995
3	DE	Delaware Sand & Gravel-Llangollen/A rmy Creek Landfill)	New Castle County	05	PRP	12/15/94	4	1996
3	DE	Dover Air Force Base	Dover	05	FF.	09/26/95	2	1997
. 3	DE	Dover Gas Light Co.	Dover	01	PRP	06/16/95	4	1997

APPENDIX B
STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1995

RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	LEAD	FUNDING Start	COMI	SENT PLETION EDULE
	DE	E.I. Du Pont de Nemours & Co.(Newpo rt Pigment plant LdF	Newport	03 04 05 06 07 08	PRP PRP PRP PRP PRP PRP	05/31/94 05/31/94 05/31/94 05/31/94 05/31/94 05/31/94	3 1 1 3 3 3	1997 1998 1999 1999 1998 1998
3	DE	Halby Chemical Co.	New Castle	01	PRP	03/16/92	2	1996
3	MD ·	Southern Maryland Wood Treating	Hollywood	03	F	09/29/95	1	1997
3	MD	Woodlawn County Landfill	Woodlawn	01 ·	PRP	01/03/95	2	1997
3	PA	Blosenski Landfill	West Caln Township	03	PRP	02/23/94	2	1997
3	PA	Butz Landfill	Stroudsburg	01	F	09/29/92	. 3	1996
3	PA	C & D Recycling	Foster Township	01	PRP	. 11/10/94	1	1997
3	PA	CryoChem, Inc.	Worman	02 03	F F	12/28/90 12/31/91	2 2	1996 1996
3	PA	Dorney Road Landfill	Upper Macungie Township	02	PRP	05/11/93	1	1996
3	PA	Eastern Diversified Metals	Hometown	02 03	PRP PRP	05/11/94 08/31/93	4 1	1996 1997
3	PA	Havertown PCP	Haverford	02	F	04/10/92	<b>3</b> ,	1996
. 3	PA	Heleva Landfill	North Whitehall	03	PRP	06/21/94	1	1997
3	PA	Hunterstown Road	Straban Township	01	F	09/12/94	. 1	1997
3	PA	Keystone Sanitation Landfill	Union Township	03 04	PRP PRP	03/11/92 03/11/92	4	1996 1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	LEAD	FUNDING		SENT PLETION EDULE
3	PA	Lindane Dump	Lindane	01	PRP	09/24/93	4	1996
3	PA	MW Manufacturing	Valley Township	01 03	PRP F	06/01/93 09/30/90	2	1996 1996
3	PA ·	Naval Air Development Center (8 waste centers)	Warminster Township	04	FF	03/10/95	2	1996
. <b>3</b>	PA.	North Penn-Area 1(Gentle Cleaners/Granite Knitting Mill	Souderton	. 01	F	02/07/95	2	1996
3	PA	Novak Sanitary Landfill	South Whitehall Twp	<b>01</b> .	PRP	07/30/95	4	· 1997
3	PA	Occidental Chemical Corp./Firestone Co.	Lower Pottsgrove Twp.	01	PRP	08/23/94	4	1996
3	PA	Paoli Rail Yard	Paoli	01	PRP	07/22/93	1	1998
3	PA	Recticon/Allied Steel Corp.	East Coventry Twp.	01 02 03	PRP PRP PRP	05/11/94 05/11/94 05/11/94	1 3 3	1996 1996 1996
3	PA	Revere Chemical Co.	Nockamíxon Township	01 02	PRP PRP	01/13/95 01/13/95	4 3	1995 1996
3	PA	Saegerton Industrial Area	Saegertown	01	PRP	10/18/93	2	1996
3	PA	Tonolli Corp.	Nesquehoning	01	PRP	12/21/93	1	1997
3	PA	Westinghouse Elevator Co. Plant	Gettysburg	01	PRP.	03/16/93	3	1996
3	PA	Whitmoyer Laboratories	Jackson Township	03 05	PRP PRP	03/05/92 03/05/92	1 3	1998 1996
3	PA	William Dick Lagoons	West Caln Township	01 02 03	F PRP PRP	09/17/92 07/10/95 07/10/95	1 1 4	1997 1997 1996
3	VA	Arrowhead Associates/Scovill Corp.	Montross	01	PRP	09/07/94	1	1997

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING Start		SENT PLETION EDULE
3	VA	Greenwood Chemical Co.	Newton	02	F	02/20/92	3	1996
3	VA	L.A. Clarke & Son	Spotsylvania County	04	PRP	03/03/90	4	1996
3	VA	Rentokil, Inc. (Virginia Wood Preservation Division)	Richmond	01	PRP	05/02/94	2	1996
3	VA	Saunders Supply Co.	Chuckatuck	01	F	07/22/92	3	1996
3	WV	Fike Chemical	Nitro	03	PRP	10/07/93	2	1996
3	WV	Ordnance Works Disposal Areas	Morgantown	01	PRP	08/06/90	1	1997
3	WV	West Virginia Ordnance	Point Pleasant	06	FF	01/11/94	3	1996
4	AL	Ciba-Geigy Corp. (McIntosh Plant)	McIntosh	02 04	PRP PRP	05/26/92 07/12/93	3	1996 1996
4	AL	Interstate Lead Co. (ILCO)	Leeds	. 01	F	09/30/91	4	1997
4	AL	Olin Corp. (McIntosh Plant)	McIntosh	01	PRP	08/30/95	4	1996
4	AL	Redwing Carriers, Inc. (Saraland)	Saraland	01	PRP	11/16/93	2	1996
4	AL	Stauffer Chemical Co. (Clemoyne Plant)	Axis	01 03	PRP F	11/20/92 03/08/94	4 1	1995 1997
- 4	AL	Stauffer Chemical Co. (Cold Creek Plant)	Bucks	03	F	03/08/94	1	1997
4	AL	T.H. Agriculture & Nutrition Co. (Montgomery Plant)	Montgomery	01	PRP	09/27/95	2	1997
4	FL	Airco Plating Co.	Miami	01	PRP	09/20/94	1	1996
4	FL	American Creosote Works, Inc. (Pensacola Plant)	Pensacola	02	F,	04/18/94	2	1996
4	FL	Anodyne, Inc.	North Miami Beach	01 01	F* .	12/12/94 08/12/94	4 3	1995 1996

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RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	LEAD	FUNDING START	COM	SENT PLETION EDULE
4	FL	B&B Chemical Co., Inc.	Hialeah	01	PRP	09/20/95	1	1997
4	FL	Cecil Field Naval Air Station	Jacksonville	06	FF .	04/21/95	. 1	1996
4	FL	Jacksonville Naval Air Station	Jacksonville	02	FF	09/21/95	4	1996
4	FL	Munisport Landfill	. North Miami	01 01	PRP PRP	12/12/91 12/12/91	1 4	1996 1996
4	FL	Piper Aircraft/Vero Beach Water & Sewer	Vero Beach	· 01	F	09/22/94	2	1996
4	FL	Reeves Southeast Galvanizing Corp.	Tampa	01 02 03	PRP PRP PRP	03/26/93 11/30/94 11/30/94	4 1 3	1995 1997 1996
4	GA	Cedartown Industries, Inc.	Cedartown	01	PRP	11/03/93	4	1995
4	GA	Firestone Tire & Rubber Co.	Albany	01	PRP	03/16/94	3	1995
4	GA	Hercules 009 Landfill	Brunswick	01	PRP	10/07/93	1	1996
4	GA	Marzone Inc./Chevron Chemical Co.	Tifton	01	PRP	08/14/95	4	1996
4	GA	Mathis Brothers Landfill (South Marble Top Road)	Kensington	01	PRP	10/14/93	2	1997
4	GA	Robins Air Force Base (Landfill #4/ Sludge Lagoon)	Houston County	01	FF	08/01/91	2	1997
4	GA	T.H. Agriculture & Nutrition Co.	Albany	01	PRP	11/01/93	4	1995
4	GA	Woolfolk Chemical Works, Inc.	Fort Valley	01 02	PRP PRP	06/28/94 09/29/95	4	1996 1996
4	KY	Brantley Landfill	Calvert City	01	PRP	05/08/95	2	1997
4	KY	Green River Disposal, Inc.	Macco	01	PRP .	05/12/95	.1	1996
4	KY	Smith's Farm	Brooks	02	PRP	06/01/94	1	1996
				_				

APPENDIX B
STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1995

		•		OPER- Able		FUNDING		SENT PLETION
RG	ST	SITE NAME	LOCATION	UNIT	LEAD	START	SCH	EDULE
4	NC	Aberdeen Pesticide Dumps	Aberdeen	01	PRP	08/24/93	2	1996
•		, , , , , , , , , , , , , , , , , , ,		01	PRP	08/24/93	3	1996
		•		01	PRP	08/24/93	3	1996
				01	PRP	08/24/93	4	1996
				01	PRP	08/24/93	4	1996
				02	PRP	03/14/90	1	1996
				03	PRP	08/25/94	2	1997
		•	•	04	PRP	08/24/93	ī	1996
			•		•			
4	NC	Bypass 601 Ground Water Contaminati on	Concord	02	PRP	10/06/94	2	1997
4	NC	Camp Lejeune Military Reservation (Marine Corp Base)	Onslow County	06	FĘ	12/28/94	1	1996
4	NC	Carolina Transformer Co.	Fayetteville	01	F	09/30/92	. 2	1996
4	NC	FCX, Inc. (Statesville Plant)	Statesville	01	F	08/03/94	1	1996
				02	F	08/18/94	1	1996
4	NC	FCX, Inc. (Washington Plant)	Washington	01	F	02/23/94	4	1996
4	NC	Geigy Chemical Corp. (Aberdeen Plant)	Aberdeen	01	PRP	05/21/93 ·	1	1996
4	NC	JFD Electronics/Channel Master	Oxford	01	PRP	08/20/93	. 2	1996
4	NC	National Starch & Chemical	Salisbury	03	PRP	09/29/95	4	1996
*	NC	Corp.	Sat I Shui y	04	PRP	09/29/95	4	1996
		τοι <b>ρ.</b>	•	04	FNF	07/27/73	7	1770
4	NC	New Hanover County Airport Burn Pit	Wilmington	01	PRP	04/18/94	. 1	1996
4	sc	Helena Chemical Co. Landfill	Fairfax	01	PRP	06/23/94	1	1996
4	SC	Kalama Specialty Chemicals	Beaufort	. 01	PRP	08/09/94	1	1996
7	-		. Doddi of C	01	PRP	08/09/94	ż	1996
		•		•,	• •••	,, - 1	-	****
4	SC	Koppers Co., Inc. (Charleston Plant)	Charleston	01	· PRP	06/05/95	2	1996

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STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1995

RG	ST	SITE NAME	LOCATION	. OPER- ABLE Unit	LEAD	FUNDING Start	COM	SENT PLETION EDULE
4	sc	Lexington County Landfill Area .	Саусе	01	PRP	06/13/95	4	1997
4	sc	Para-Chem Southern, Inc.	Simpsonville	01	PRP	08/04/94	4	1995
4	sc	Rock Hill Chemical Co.	Rock Hill	01	PRP	03/23/95	3	1996
4	sc	SCRDI Bluff Road	Columbia	01	PRP	11/01/91	4	1995
4	sc	Sangamo Weston, Inc./Twelve-Mile Creek/Lake Hartwel PCB	Pickens	01	PRP	06/30/92	1	1996
4	sc	Savannah River Site (USDOE)	Aiken	29	FF	02/16/95	4	1995
4	TN	Milan Army Ammunition Plant	Milan	14	F.F	04/19/95	- 3	1996
4	TN	Murray-Ohio Dump	Lawrenceburg	01	PRP	05/17/95	. 4	1996
5	IL	Acme Solvent Reclaiming, Inc.	Morristown	04 08	PRP PRP	11/18/91 11/18/91	4	1996 1997
5	IL	NL Industries/Taracorp Lead Smelter	Granite City	01	F	03/08/91	1	1996
5	IL	Pagel's Pit	Rockford	01	PRP	12/14/92	2	1997
5	ΙL	Tri-County Landfill Co./Waste Management of Illinois, Inc.	South Elgin	01	PRP	02/02/94	1	1997
5	IL	Woodstock Municipal Landfill	Woodstock	01	PRP	09/02/94	1	1997
5	IN	American Chemical Service, Inc.	Griffith	01 01	PRP PRP	09/30/94 09/30/94	1 3	1997 1996
5	IN	Conrail Rail Yard (Elkhart)	Elkhart	02	F	. 06/14/95	3	1997
.5	IN	Douglas Road/Uniroyal, Inc., Landfill	Mishawaka	01	F	02/23/95	3	1996

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STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1995

RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	LEAD	FUNDING START	COM	SENT PLETION EDULE
5	IN	Himco, Inc., Dump	Elkhart	01	F	04/13/95	2	1996
5	IN	Lakeland Disposal Service, Inc.	Claypool	01	PRP	05/25/94	2	1997
5	IN	Neal's Dump (Spencer)	Spencer	01	PRP	08/22/85	3	1996
5	IN	Reilly Tar & Chemical Corp. (Indianapolis Plant)	Indianapolis	03	FE*	09/14/94	4	1995
5	MI	Berlin & Farro	Swartz Creek	02	PRP	12/07/92	1	1996
5	MI	Butterworth #2 Landfill	Grand Rapids	01	PRP	02/23/93	3	1996
<b>5</b>	MI	Cannelton Industries, Inc.	Sault Sainte Marie	01	PRP	05/10/93	1	1997
5	MI	Chem Central	Wyoming Township	01	PRP	04/07/92	. 1	1996
5	MI	Duell & Gardner Landfill	Dalton Township	01	PRP	07/29/94	2	1997
5	MI	Electrovoice	Buchanan	01 01	PRP PRP	09/29/93 05/08/95	1 4	1996 1996
5	MI	Forest Waste Products	Otisville	02	· PRP*	06/27/88	2	1996
5	MI	Ionia City Landfill	Ionia	01	PRP	09/13/90	1	1998
5	MI	J & L Landfill	Rochester Hills	01	PRP	06/27/95	4	1996
5	MI	K & L Avenue Landfill	Oshtemo Township	01	PRP	09/18/92	1	1999
5	MI	Metamora Landfill	Metamora	02 <sup>-</sup>	PRP	04/26/91	4	1996
5	MI	Motor Wheel, Inc.	Lansing	01	PRP	05/16/92	1	1996
5	MI	Peerless Plating Co.	Muskegon	01	F	09/21/92	1	1996
5	MI	Rose Township Dump	Rose Township	01	PRP	07/18/89	1	1996
5	MI	Spartan Chemical Co.	Wyoming	02	s	09/28/93	3	1999

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	COP	SENT PLETION EDULE
5	MI	Sturgis Municipal Wells	Sturgis ;	01	s	09/21/93	1	1997
5	MI	Tar Lake	Mancelona Township	01	PRP.	03/09/93	4	1996
5	MI	Torch Lake	Houghton County	01	F	09/01/94	1	1998
5	MI	Wash King Laundry	Pleasant Plains Twp	01	S	09/21/93	2	1996
5	MN	MacGillis & Gibbs Co./Bell Lumber & Pole Co.	New Brighton	01 03 03	S F F	07/16/93 03/31/95 03/31/95	4 3 1	1996 1996 1997
5	MN	New Brighton/Arden Hills	New Brighton	07	FF	09/30/93	4	1995
5	MN	Perham Arsenic	Perham	01	, <b>F</b>	09/19/94	4	1996
5	MN	Ritari Post & Pole	Sebeka	01	S	11/14/94	1	1996
5	MN	St. Regis Paper Co.	Cass Lake	01	PRP	04/28/95	4	1996
5	OH	Allied Chemical & Ironton Coke	Ironton	02 02 02	PRP PRP PRP	06/16/93 07/23/93 06/16/93	1 1 1	1996 1997 1996
5	OH	Feed Materials Production Center (USDOE)	Fernald	01 02 04 06	FF FF FF	04/25/95 08/07/95 02/07/95 09/19/94	3 1 1 4	1996 1997 1998 2005
5	ОН	Fields Brook	Ashtabula	01	PRP	03/22/89	4	1997
5	ОН	Fultz Landfill	Jackson Township	01	F	06/24/92	1	1996
5	OH	Industrial Excess Landfill	Uniontown	01 01	F F	09/29/89 09/29/89	1 2	1996 1996
5	ОН	Miami County Incinerator	Troy	01	PRP	04/02/93	2	1996
5	ОН	Powell Road Landfill	Dayton	01	PRP	06/21/94	1	1997

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RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	LEAD	FUNDING Start	COM	SENT PLETION EDULE
5	ОН	Pristine, Inc.	Reading	05 05	PRP .	10/29/91 12/10/94	2 4	1996 <sup>-</sup> 1996
5	OH	Sanitary Landfill Co. (Industrial Waste Disposal Co.Inc	Dayton	01	F*	06/06/94	2	1996
5	ОН	Skinner Landfill	West Chester	02 02	PRP PRP	03/29/94 03/29/94	3 3	1996 1996
5	ОН	Van Dale Junkyard	Marietta	01	PRP	09/23/94	2	1996
5	ОН	Zanesville Well Field	Zanesville	01	F*	09/21/92	1	1996
5	WI	City Disposal Corp. Landfill	Dunn	01	PRP	04/23/93	3	1997
5	WI	Eau Claire Municipal Well Field	Eau Claire	01	F	09/29/88	3	1996
5	WI	Hunts Disposal	Caledonia	01	PRP	05/05/92	2	1996
5	WI	Janesville Ash Beds	Janesville	01	PRP	07/12/91	3	1996
5	WI	Janesville Old Landfill	Janesville	01	PRP	07/12/91	3	1996
5	WI,	Master Disposal Service Landfill	Brookfield	01	PRP	08/13/91	3	1996
5	WI	Moss-American (Kerr-McGee Oil Co.)	. Milwaukee	01	PRP	07/15/91	3	1996
5	WI	Muskego Sanitary Landfill	Muskego	02	PRP	06/26/95	1	1997
5	WI	Stoughton City Landfill	Stoughton	01	F	09/28/92	2	1997
6	AR	South 8th Street Landfill	Jacksonville	. 01	F	09/11/92	3	1996
6	AR	Vertac, Inc.	Jacksonville	05	PRP	04/19/94	4	1996
6	LA	American Cresote Works, Inc (Winnfield)	Winnfield	01	F <sub>.</sub>	02/19/92	4	1995
6	LA	Gulf Coast Vaccuum Services	Abbeville	· 01 02	PRP PRP	05/24/94 12/11/92	<b>3</b> 4	1996 1995

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	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	COM	SENT PLETION EDULE
₹G	31	SITE NAME	LOOKI TON					
6	LA	PAB Oil & Chemical Service,	Abbeville	01	F	11/17/94	1	1997
6	NM	Cleveland Mill	Silver City	01	PS	01/19/95	4	1996
6	NM	Prewitt Abandoned Refinery	Prewitt	01 01	PRP PRP	05/14/93 01/15/95	2	1996 1996
6	OK	Double Eagle Refinery Co.	Oklahoma City	01	F	. 06/21/93	4	1996
6	OK	Oklahoma Refining Co. (Pesses Chemical Co.)	Cyril	01	\$	09/22/92	.4	1996
6	TX	Crystal Chemical Co.	Houston	01	PRP	03/3.1/92	3	1996
6	TX.	Koppers Co., Inc. (Texarkana Plant)	Texarkana	01 01	PRP PRP	03/31/93 03/31/93	1 4	1996 1997
6	ТX	Petro-Chemical Systems, Inc. (Turtle Bayou)	Liberty County	02 <b>03</b>	PRP PRP	09/25/92 09/25/92	1 1	1997 1997
6	тx	RSR Corp.	Dallas	03 04 05	F F F	07/15/93 05/10/93 05/10/93	4 3 3	1996 1996 1996
6	ТX	Sheridan Disposal Service	Hempstead	01 02	PRP PRP	12/29/89 03/29/90	1 2	1997 1997
7	KS	29th & Mead Ground Water Contaminat ion	Wichita	02	PRP .	05/18/94	4	1996
7	KS	Strother Field Industrial Park	Cowley County	01	PS	12/18/94	2	1996
7	МО	Ellisville Site	Ellisville	04 05	EP EP	10/07/91 10/07/91	1 2	1996 1996
7	МО	Minker/Stout/Romaine Creek (Area 2: Fills 1 & 2)	Imperial	01	EP	05/01/91	2	1996
7	МО	Shenandoah Stables (once listed as Arena 1: Shenandoah Stables)	Moscow Mills	02	EP	05/01/91	2	1996
		•				•		

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				OPER-			DD	ESENT
				ABLE		FUND ING		MPLETION
RG	ST	SITE NAME	LOCATION	UNIT	LEAD	START		HEDULE
			,					
7	МО	Weldon Spring Quarry (USDOE/Army)	St. Charles	01	FF	05 /45 /05	7	4007
			County	02	FF FF	05/15/95 05/20/94		1996 1996
				03	FF	10/15/93	1	1996
				03	FF	10/11/93	4	1996
7	МО	Weldon Springs Ordnance Works	St. Charles	01		/		•
•		metaell opi mgs of andrice works	County	UI	FF	04/04/94	4	1997
~					**			
7	NE	Cornhusker Army Ammunition Plant	Hall County	01	FF	12/01/94	2	1997
		·						
7	NE	Hastings Ground Water Contamination	Hastings	01	PRP	04/27/93	1	1998
			. <del>-</del>	02	PRP	10/01/92	i	1997
				04	PRP	09/28/90	i	1997
				10	PRP	10/01/92	1	1996
7	NE	Nebraska Ordnance Plant (Former)	Mead	01	PRP	08/29/95	4	1996
8	CO	Chemical Sales Co.	Commerce City	· 01	F	04/08/94	1	1996
			•	04	F	05/09/94	3	1996
8	СО	Denver Radium Site	Denver	08	PRP	06/07/92	2	1004
_			56	00	FRF	00/01/72	2	1996
. 8	CO	Eagle Mine	Minturn/Redcliff	. 01	PRP	06/08/94	2	1996
8	CO	Lowry Landfill	'Arapahoe County	01	PRP	05/15/95	4	1996
8		Pechy Flata Disease (NODOF)				•	•	.,,,
0	CO	Rocky Flats Plant (USDOE)	Golden	. 02	.FF	09/01/92	4	1995
8	CO	Rocky Mountain Arsenal	Adams County	27	FF	09/24/93	. 1	1994
				28	FF	02/05/93	3	1996
8	CO	Summitville Mine	Rio Grande	04	•	07 445 405		
_			County	U4	F	03/15/95	4	1997
8	MT	Idaho Pole Co.	Bozeman	01	000	00,00,07		
-	•••		60Zettiari	UI	PRP	09/08/93	3	1996

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RG ST		SITE NAME	LOCATION	OPER- ABLE UNIT LEAD		FUNDING START	PRESENT COMPLETION SCHEDULE	
8	MT	Montana Pole and Treating	Butte	01	F	08/16/94	2	1996
8	UT	Hill Air Force Base	Ogden	04	FF	06/14/94	4	1996
8	UT	Midvale Slag .	Midvale	01	<b>s</b> .	03/27/95	1	1996
8	UŤ	Monticello Mill Tailings (USDOE)	Monticello	01 01 02 02	FF FF FF FF	12/24/91 01/12/93 05/12/92 07/26/93	4 3 2 4	1996 1998 1996 1996
. 8	UT	Monticello Radioactively Contaminat ed Properties	Monticello	02 03 04	FE F PRP	09/29/89 11/23/93 03/17/95	2 2 3	1996 1996 1997
-8	UT	Sharon Steel Corp. (Midvale . Tailings/Smelters)	Hidvale	02	<b>.</b>	09/27/93	1	1996
8	UT	Utah Power & Light/American Barrel Co.	Salt Lake City	01	PRP	09/18/95	1	1996
8	WY	Baxter/Union Pacific Tie Treating	Laramie	01	PRP	02/15/87	1	1993
9	AZ	Apache Powder Co.	St. David	01	PRP	03/22/95	1	1997
9	AZ	Hassayampa Landfill	Hassayampa	01	PRP	03/14/95	1	1996
9	AZ	Phoenix-Goodyear Airport Area	Goodyear	01	PRP	01/04/91	4	1996
9	-AZ	Tucson International Airport Area	Tucson	01	PRP	01/07/89	1	1997
9	CA	Brown & Bryant, Inc. (Arvin Plant)	Arvin	01	F	04/19/94	1	1996
9	CA	Castle Air Force Base	Merced	03	FF	03/01/93	1	1996
9	CA	Fairchild Semiconductor/Camera & (South San Jose Plant)	South San Jose	01	PRP	01/02/91	3	1996
9	ĊA	Fort Ord	Marina	02 03	FF FF	09/29/95 09/15/94	. 4	1996 1997

APPENDIX B
STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1995

RG	ST	SITE NAME	LOCATION	OPER- ABLE Unit	LEAD	FUNDING Start	COM	SENT IPLETION IEDULE
9	CA	Fresno Municipal Sanitary Landfill	Fresno	01	PRP	12/17/93	3	1997
9	CA	George Air Force Base	Victorville	01	. FF	03/07/94	1	1996
9	CA	Intel Corp. (Mountain View Plant)	Mountain View	01	PRP	05/14/91	3	1996
<b>9</b>	CA	Iron Mountain Mine	Redding	01 02 03	F PRP PRP	09/21/92 01/27/93 09/21/94	1 1 1	1996 1996 1996
9	CA	J.H. Baxter & Co.	Weed	01 01	PRP PRP	08/19/91 08/19/91	1	1997 1997
9	CA	Jasco Chemical Corp.	Mountain View	01	PRP	12/16/92	1	1996
9	CA	Koppers Co., Inc. (Oroville Plant)	Oroville	<u>0</u> 1 01	PRP PRP	02/21/92 02/21/92	1	1997 1997
9	CA	Lawrence Livermore National Laboratory	Livermore	02	FF	09/26/95	2	1996
9	CA	Lawrence Livermore National Laboratory (USDOE)	Livermore	01	FF	08/05/92	1 ,	1998
. 9	CA	Lorentz Barrel & Drum Co.	San Jose	01	F	03/15/95	3	1996
9	CA	Mather Air Force Base (AC & W Disposal Site)	Sacramento	02	· FF	08/15/95	5	1996
9	CA	McColl	Fullerton	02	PRP	08/31/93	4	1996
9	CA	Newmark Ground Water Contamination	San Bernadino	01 02	F F	09/24/93 04/17/95	3 2	1996 1997
9	CA	Operating Industries, Inc., Landfill	Monterey Park	03	PRP	04/01/92	1	1997
9	CA	Purity Oil Sales, Inc.	Malaga	02	PRP	10/25/93	2	1996
9	CA	Raytheon Corp.	Mountain View	01	PRP	05/14/91	3	1996
			•					

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RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	·LEAD	FUNDING START	COM	SENT PLETION EDULE
9	CA	Riverbank Army Ammunition Plant	Riverbank	01	FF	03/23/94	1	1996
9	CA	Sacramento Army Depot	Sacramento	01 04 05	FF FF FF	03/13/95 03/13/95 03/13/95	3 3 3	1997 1996 1996
9	ÇA	San Fernando Valley (Area 2)	Los Angeles/Glendale	02 03	PRP PRP	05/01/94 05/01/94	1	1996 1996
9	CA	Tracy Defense Depot	Tracy	. 02	FF	08/12/93	2	1996
9	CA	Valley Wood Preserving, Inc.	Turlock	01	F	06/25/92	. 1	1996
. 9	CA	Waste Disposal, Inc.	Santa Fe Springs	01	PRP	09/27/94	1	1997
9	NV	Carson River Mercury Site (Trust Territories PC)	Lyon/Churchill County	01 ·	F	04/05/95	1	1996
10	AK	Eielson Air Force Base	Fairbanks N Star Borough	01 . 02	FF FF	10/18/94 10/18/94	1 4	1996 1995
10	AK	Elmendorf Air Force Base	Greater Anchorage Borough	01 - 02 05	FF FF FF	03/16/95 06/09/95 03/17/95	1 2 1	1996 1996 1996
10	ID	Bunker Hill Mining & Metallurgical	Smelterville	02	F	03/29/93	4	1997
10	ID	Idaho National Engineering Lab (USDOE)	Idaho Falls	15 18 19	FF FF FF	12/23/94 09/24/93 11/07/94	2 1 3	1996 1996 1996
10	OR	Umatilla Army Depot (Lagoons)	Hermiston	03 04 06 07	FF FF FF FF	09/12/94 09/02/94 09/02/94 07/19/94	4 1 1	1995 1996 1997 1996
10	WA	American Crossarm & Conduit Co.	Chehalis	01	F	01/14/94	4	1995
10	WA	Bangor Naval Submarine Base	Silverdale	01 05	FF FF	09/28/94 09/02/94	1 1	1996 1996

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00 07		CITE HAVE		OPER- ABLE Unit Lead		FUNDING	PRESENT COMPLETION	
RG	ST	SITE NAME	LOCATION	UNIT	LEAD	START	SCH	EDULE
10	WA	Commencement Bay, Near Shore/Tide Flats	Pierce County	06 07 12 13	PS PS PRP PRP	01/15/93 01/30/91 05/18/94 06/22/94	4 4 4 2	1995 1995 1998 1997
10	WA	Fairchild Air Force Base (4 Waste Area)	Spokane County	02	FF	11/18/93	3	1996
10	WA	Fort Lewis Logistics Center	Tillicum	02 03	FF FF	10/15/93 10/15/93	2	1996 1996
10	WA	Frontier Hard Chrome, Inc.	Vancouver	01	F	03/23/88	2	1997
10	WA	Hanford 200-Area (USDOE)	Benton County	13	FF	06/07/95	4	1997
10	WA	Naval Undersea Warfare Engineering Stn. (4 Waste Area)	Keyport	. 02	FF	03/31/95	4	1996
10	WA	Puget Sound Naval Shipyard Complex	Bremerton	01	FF .	08/04/95	3	1996
10	WA	Queen City Farms	Maple Valley	01	PRP	09/20/94	3	1997
10	WA	Wycoff Co./Eagle Harbor	Bainbridge Island	03	PRP	04/04/94	1	1996

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## Appendix C List of Records of Decision

This appendix provides a specific list of FY95 records of decision (RODs) signed from October 1, 1994 through September 30, 1995. Detailed descriptions of the feasibility studies, as required by CERCLA Section 301(h)(1)(a), are available from the National Technology Information Services (NTIS) at 703-605-6000. EPA's Superfund Docket Center will assist in providing the publication number or answer any questions about the availability of specific RODs and can be reached at 703-603-9232. RODs can also be ordered through NTIS over the internet at http://www.fedworld.gov/ntis/ntishome.html.

REGION	SITE		STATE	DATE
1	Davisville Naval Construction Battery Center	•	RI	9/18/95
	Fort Devens (AOCs 44 AND 52)		MA	3/28/95
	Fort Devens (Shepley's Hill Landfill)	of the second second	MA	9/26/95
	Fort Devens - Sudbury Training Annex		MA	9/29/95
	Loring Air Force Base		ME	9/20/95
	New London Naval Submarine Base		СТ	9/26/95
•	Otis Air National Guard/Camp Edwards	•	MA	9/25/95
	Otis Air National Guard/Camp Edwards		MA	9/29/95
	Parker Sanitary Landfill		VT	4/4/95
	Pease Air Force Base (Site 32/36) (OU4)		·· NH	9/26/95
	Pease Air Force Base (Site 45) (OU10)	•	NH	8/9/95
	Pease Air Force Base (Zone 1)		NH	6/26/95
	Pease Air Force Base (Zone 2)		NH	9/18/95
	Pease Air Force Base (Zone 3)		NH	9/26/95
•	Pease Air Force Base (Zone 4) (OU8)		NH	. 1/30/95
	Raymark Industries, Inc.		СТ	7/3/95
	Transitor Electronics, Inc.		VT	9/29/95
2	Anchor Chemicals		NY	9/29/95
	Batavia Landfill		NY	6/6/95
•	Caldwell Trucking		NJ	2/27/95
	Carroll & Dubies Sewage Disposal		NY	3/31/95
	Chemical Insecticide Corp.		NJ	3/28/95
	Denzer & Schafer X-Ray Co.		NJ	9/29/95
	GCL Tie and Treating, Inc.		NY	3/31/95
	Genzale Plating Co.		NY	9/29/95
	Goldisc Recordings, Inc.	•	NY	9/29/95
•				

REGION	SITE	STATE	DATE
	Hooker (102nd Street)	NY	6/9/95
	JIS Landfill	NJ	8/15/95
	King of Prussia	NJ	9/27/95
	Naval Air Engineering Center	NJ	1/5/95
	Niagara Mohawk Power Co. (Saratoga Springs)	NY	9/29/95
	PJP Landfill	NJ	9/28/95
	Plattsburgh Air Force Base	NY	3/31/95
•	Plattsburgh Air Force Base (Site ST-020)	NY	3/31/95
	Sealand Restoration, Inc.	NY	9/29/95
	Sydney Landfill	NY	9/28/95
	U.S. Radium Corp.	NJ	8/29/95
	Warwick Landfill	NY	9/29/95
з .	A.I.W. Frank/Mid-County Mustang	PA	9/29/95
	Aberdeen Proving Ground	MD	9/8/95
	Aberdeen Proving Ground (Edgewood Area)	MD	10/11/94
	Atlantic Wood Industries, Inc.	· VA	9/29/95
	Brodhead Creek	PA	6/30/95
	Bush Valley Landfill	MD	9/26/95
	Centre County Kepone	PA	4/21/95
	Dover Air Force Base (Bldg. 124 (WP32))	DE	3/28/95
	Dover Air Force Base (Bldg. 918)	DE	3/28/95
	Dover Air Force Base (Target Area 2 of Area 6)	DE	9/26/95
	Dover Air Force Base (Target Area 3 of Area 6)	DE	9/26/95
	Dover Air Force Base (Target Area 1 of Area 6)	DE	9/26/95
•	Dover Air Force Base (Lindane Source Area of Area 6)	DE	9/26/95
	H & H Inc., Burn Pit	VA	6/30/95
	Naval Air Development Center (8 Areas)	PA	3/10/95
	Naval Weapons Station - Yorktown	PA	9/29/95
	North Penn - Area 6	PA	9/29/95
	Resin Disposal	PA	9/29/95
	Saltville Waste Disposal Ponds	VA	9/29/95
	Shriver's Corner Site	PA	9/29/95
	Southern Maryland Wood Treating	MD	9/8/95
	Standard Chlorine of Delaware, Inc.	DE	3/9/95
	Sussex County Landfill No.5	DE	12/29/94
	U.S. Defense General Supply	VA	9/29/95
	Westinghouse Elevator Co. Plant	PA	3/31/95
	York County Solid Waste/Refuse Landfill	PA	12/29/94
4	Anaconda Aluminum Co./Milgo Electronics	FL	11/22/94
	Beaunit Corp. (Circular Knit & Dye)	SC -	9/29/95
	Brantley Landfill	KY	12/14/94
	Carolawn Inc.	SC	9/21/95
	Ciba-Geigy Corp. (McIntosh Plant)	AL	7/25/95
	FCX, Inc. (Statesville Plant)	NC	11/22/94
	Fort Hartford Coal Co. Stone Quarry	KY	3/30/95
	General Electric Co./Shepherd Farm	NC	9/29/95

REGION	SITE	fee and the second	STATE	DATE
	Green River Disposal, Inc.		KY	12/14/94
	Helena Chemical Co. Landfill		SC	.9/1/95
	Harris Corp. (Palm Bay Plant)		u u "FL	2/15/95
	Interstate Lead Co. (ILCO)		AL	9/29/95
	Interstate Lead Co. (ILCO)		AL	10/13/94
	Koppers Co., Inc. (Charleston Plant)		sc	3/29/95
	National Starch & Chemical Corp.		NC	10/6/94
	Olin Corp. (McIntosh Plant)		AL	12/16/94
	Palmetto Recycling, Inc.	÷	sc	3/30/95
	Pensacola Naval Air Station		FL	8/3/95
	Sixty-Second Street Dump		FL	6/29/95
	Stauffer Chemical Co. (Cold Creek Plant)		AL	8/16/95
-	Taylor Road Landfill	•	FL .	9/29/95
	T.H. Agriculture &Nutrition (Montgomery)	*	AL	4/17/95
	US DOE Oak Ridge Reservation		TN	8/17/95
	US DOE Oak Ridge Reservation (Kerr Hollow	Quarry)	TN	9/29/95
	US DOE Oak Ridge Reservation (Lower Watt	• 1	TN	9/29/95
·	US DOE Paducah Gas Diffusion Plant (NE Plu		KY	6/15/95
	US DOE Paducah Gas Diffusion Plant (SWM)	·	KY	8/22/95
	US DOE Savannah River Site (GW OU)	·	SC	11/9/94
_	US DOE Savannah River Site (PAR Ponds)		sc	2/13/95
	US DOE Savannah River Site		. sc	3/6/95
•	US DOE Savannah River Site		sc	4/13/95
	US DOE Savannah River Site	*	SC	4/13/95
	US DOE Savannah River Site (M - Area)	•	sc	9/11/95
	USA Alabama Army Ammunition Plant		AL	11/14/94
	USAF Homestead AFB		FL	9/7/95
	USAF Homestead AFB 0U4		FL	6/22/95
	USAF Homestead AFB OU6		FL	8/24/95
	USAF Robins AFB (Landfill/Sludge LA)	,	GA ·	9/25/95
	USMC Camp Lejeune		NC	9/22/95
	USMC Logistics Base 555		· GA	10/11/94
	USMC Logistics Base 555	•	GA	6/23/95
	USN NAS Jacksonville		FL	9/21/95
, s	Velsicol Chemical Corp. (Hardeman County)	•	TN	9/26/95
	Woolfolk Chemical Works, Inc.		GA	9/29/95
	Wrigley Charcoal Plant		TN	2/2/95
	Zellwood Ground Water Contamination	•	FL	8/24/95
		š		
5	Albion Sheridon Township Landfill	100	· _ MI	3/28/95
	Allied Chemical & Ironton Coke	-	ОН	7/31/95
	Carter Industrials, Inc.		MI	2/28/95
	Carter Lee Lumber Co.		. ·IN ·	9/29/95
	Douglas Road Uniroyal Inc. Landfill		IN	7/13/95
· ·	Feed Materials Production Center (USDOE)	•	ОН	3/1/95
	Feed Materials Production Center (USDOE)	4	ОН	6/8/95
	Feed Materials Production Center (USDOE)		ОН	12/7/94
÷	Galen Myer's Dump/Drum Salvage	•	IN	9/29/95
			•••	-,,

REGION	<u>SITE</u>	STATE	DATE
	Hechimovich Sanitary Landfill	WI	9/6/95 ·
	Mid-State Disposal Inc. Landfill	WI	8/4/95
	Muskego Sanitary Landfill	Wi	2/2/95
	Petoskey Municipal Wellfield	MI	6/14/95
	Pine Bend Sanitary Landfill	MN	9/28/95
	Refuse Hideaway	WI	6/28/95
	Reilly Tar & Chemical St. Louis Park	MN	6/30/95
	Rockwell International Corp. Allegan Plant	MI	7/11/95
	Sauk County Landfill	WI	9/28/95
	Southside Sanitary Landfill	· IN	9/28/95
	SE Rockford Groundwater Contamination	IL	9/29/95
	US DOE Mound Plant	ОН	6/12/95
	Whiteford Sales & Service National Lease	IN ·	9/29/95
6	Bayou Bonfouca	LA	7/20/95
	Longhorn Army Ammunition Plant	TX	5/12/95
	Longhorn Army Ammunition Plant	TX	9/27/95
	National Zinc Corp.	OK	12/13/94
	RSR Corp.	TX	5/9/95
	RSR Corp.	TX	5/9/95
	Southern Shipbuilding	LA .	7/20/95
7	10th Street Site	NE	2/23/95
	Nebraska Ordnance Plant (Former)	NE	8/29/95
	Quality Plating	МО	1/24/95
	Sheller-Globe Corp. Disposal	IA	9/20/95
8	Ellsworth Air Force Base	SD	5/16/95
	Ellsworth Air Force Base	SD	5/16/95
	F.E. Warren Air Force Base	WY	11/3/94
	F.E. Warren Air Force Base	WY	8/9/95
	Hill Air Force Base	UT	9/28/95
	Hill Air Force Base	UT	9/28/95
	Midvale Slag	UT	4/28/95
	Portland Cement (Kiln Dust 2&3)	· UT	9/29/95
	Summitville Mine	CO	12/15/94
	Summitville Mine	CO	12/16/94
	Summitville Mine	СО	12/17/94
	Summitville Mine	, <b>co</b>	12/18/94
9	Carson River Mercury Site	NV	3/30/95
	Fort Ord	CA	4/13/95
	Hewlett-Packard (620-640 Page Mill Road)	· CA	3/24/95
	Lawrence Livermore Laboratory (Site 300)	CA	9/26/95
	Louisiana-Pacific Corp.	CA	8/1/95
	Mather Air Force Base	CA .	8/13/95
	McClellan Air Force Base (Ground Water Contamination)	CA	5/11/95
	Moffett Naval Air Station	CA	12/22/94

REGION	<u>SITE</u>	STATE	DATE
	Newmark Ground Water Contamination	CA	3/24/95
	Sacramento Army Depot	CA	1/17/95
	United Heckathron Co.	CA	10/26/94
10	Adak Naval Air Station	AK	3/31/95
	Arctic Surplus	AK	9/28/95
	Commencement Bay, Nearshore/Tide Flats	WA <sub>.</sub>	3/24/95
	Eielson Air Force Base	AK	9/22/95
	Elmendorf Air Force Base	AK	12/28/94
•	Elmendorf Air Force Base	AK	3/31/95
	Elmendorf Air Force Base	AK	<sup>′</sup> 9/27/95
	Fort Wainwright	AK	7/20/95
	Hamilton Island Landfill (USA/COE)	WA	3/30/95
•	Hanford 100-Area (USDOE) (OUs 100-BC-1, 100-DR-1 and 100-HR-1)	WA	9/28/95
	Hanford 200-Area (USDOE)	WA	1/20/95
	Hanford 200-Area (USDOE)	WA	5/24/95
•	Idaho National Engineering Lab (USDOE)	ID	12/2/94
	Idaho National Engineering Lab (USDOE)	ID	8/18/95
	Idaho National Engineering Lab (USDOE)	ID	9/28/95
	Kerr-McGee Chemical Corp. (Soda Springs)	ID	9/28/95
	Mountain Home Air Force Base (OU 1,3,5,6)	ID	9/27/95
	Naval Air Station, Whidbey Island (AULT)	WA	4/14/95
	Pacific Hide & Fur Recycling Co.	ID į	9/27/95
·	Port Hadlock Detachment (USN)	WA	8/4/95
	Teledyne Wah Chang	OR	9/27/95

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# Appendix D Report of the Inspector General



#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OCT 2 2 1998

OFFICE OF THE INSPECTOR GENERAL

## **MEMORANDUM**

SUBJECT:

Review of the Superfund Annual Reports to Congress

for Fiscal Years 1995 and 1996

Audit Report E1SFF7-11-0022-9100024

FROM:

Ñikki L. Tinsley

Timbi L. Dundey

Acting Inspector General

TO:

Carol M. Browner

Administrator

#### Background and Summary of Results

Section 301 (h)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act of 1986, requires EPA (the Agency) to submit to Congress, by January 1st of each year, a report on its progress in implementing Superfund during the prior fiscal year.

We have completed our mandated review of two of the Agency's Annual Reports to Congress (Annual Reports), <u>Progress Toward Implementing Superfund</u>. This review covers the Annual Reports for fiscal years 1995 and 1996. In accordance with Section 301 (h)(2), we reviewed these Annual Reports for reasonableness and accuracy. This report becomes part of the Annual Reports.

After conducting a limited scope review, we determined that the fiscal years 1995 and 1996 Annual Reports were generally reasonable and accurate, though we observed that the two reports are being issued late. This led us to question their usefulness since, in their absence, Congress had to obtain needed information through means other than the Annual Reports. We believe the Agency should consider alternative reporting methods like the Internet to transmit accomplishment data and the SARC faster to Congress and the public with less administrative costs.

We are closing this report on issuance. Accordingly, no written response to the report is necessary.

### Purpose, Scope and Methodology

We conducted our review at EPA Headquarters' Office of Emergency and Remedial Response (OERR) in the Office of Solid Waste and Emergency Response (OSWER), and in Regions 1 and 5. For purposes of this review, we defined "reasonableness" as information that was rationally grounded and not excessive in nature. We defined "accuracy" as consistent with supporting documentation and not contradicting past or similar information. See the attachment to this report for a complete discussion of the scope and methodology of our review.

#### **Objectives**

The overall objective of our review was to determine whether the Agency's fiscal years 1995 and 1996 Annual Reports were reasonable and accurate, as required by the statute. Sub-objectives we pursued in order to meet our overall objective were to determine whether:

- 1) the Annual Reports presented consistent accomplishment information within each report, between the two reports and with supporting documentation.
- 2) the necessary statutory requirements were met.
- 3) internal controls over data entry and reporting were adequate.
- 4) construction completion accomplishments, one of the Agency's main indicators of site progress, were supported by source documentation.

We also inquired into the causes for significant delays in issuing the Annual Reports.

## Results of the Review-

Based on our review, we believe the Annual Reports for fiscal years 1995 and 1996 were generally accurate and reasonable. Below are the review results individually addressing each of our four specific sub-objectives.

To answer our first sub-objective, we selected a judgmental sample of the majority of data relating to accomplishment results. We identified inconsistencies, most of which were minor, within and between the Annual Reports and with supporting documentation. We communicated our concerns to OERR staff who made the necessary corrections.

Concerning our second sub-objective, we noted that the draft Annual Reports did not include statutorily required information for a detailed description of each feasibility study at each facility. We notified OERR which added a reference to an alternative source for a detailed description of the feasibility studies (a CD-ROM provided by National Technology-Information Services). Additionally, Record of Decision abstracts, another source for detailed information on a site, can be found at <a href="http://www.epa.gov/superfund">http://www.epa.gov/superfund</a>. Therefore, the statutory information requirements were reasonably met.

For sub-objective three, we conducted a partial review of internal controls over data entry procedures for the data system supporting compilation of the accomplishment information and observed that in EPA Regions 1 and 5 the controls appeared adequate. (We last looked at CERCLIS data internal controls in depth in our report entitled "Reliability of CERCLIS Data: Superfund Performance Measures for Fiscal 1993," audit report number 4100229, March 30, 1994.)

Under sub-objective four, we determined that source documentation supported 100 percent of the construction completion accomplishments, one of the Agency's main indicators of site progress. (See our report entitled "Superfund Construction Completion Reporting," audit report number 8100030, December 30, 1997, which further details our work in this area.)

In addition to our four sub-objectives, we also examined the causes of significant delays in the issuance of the Annual Reports. Even though the Agency streamlined content information included in the fiscal years 1995 and 1996 Annual Reports, the reports significantly exceeded their January 1996 and January 1997 deadline dates. The fiscal year 1995 report is over two and a half years late and the fiscal year 1996 report is over a year and a half late. Part of the delay in preparing the two reports originated in the untimeliness of prior reports spanning back to the fiscal 1992 Annual Report. (For background information concerning delays in earlier Annual Reports, see our special report entitled "Superfund Reports to Congress Were Not Timely," audit report number 2400033, March 31, 1992.) Additional reasons given by the Agency for delays in preparation of the fiscal years 1995 and 1996 Annual Reports were:

- A reorganization in the report preparation office in early 1996;
- Expiration of the contract to support the fiscal 1992 through 1994 Annual Reports' preparation and a delay in awarding the subsequent support contract; and
- Subsequent in-house preparation and printing of the fiscal 1992 through 1994 Annual Reports.

#### **Conclusions**

The Agency took the necessary actions to correct and clarify information during our review of these Annual Reports; therefore, as of the date of this report, we believe the fiscal years 1995 and 1996 Annual Reports are generally reasonable and accurate. However, we observed that the two reports are being issued late, despite streamlining efforts. This led us to question their usefulness since, in their absence, Congress obtains needed information through other means. We believe the Annual Reports will continue to be late unless OSWER adopts additional corrective actions to improve the report production process. We suggest the Agency should consider alternative reporting methods like the Internet to transmit accomplishment data and the SARC faster to Congress and the public with less administrative costs. This suggestion is provided for Agency consideration, but we are not making a formal recommendation at this time.

## Scope and Methodology

With respect to the first sub-objective discussed on page 2, we compared Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) printouts and other supporting documents to the data included in the Annual Reports. We reviewed key accomplishment data in each of the Annual Reports' executive summary exhibits ("Summary of Fiscal Year 1995 [or 1996] Superfund Activities" and "Summary of Program Activity by Fiscal Year") and compared the data in the exhibits to the data within the texts of the Annual Reports themselves. We also compared the consistency between the two Annual Reports, and reviewed accomplishment numbers from past fiscal years to detect any significant increases or decreases. Additionally, we reviewed accomplishment definitions to identify any changes that would cause significant increases or decreases in accomplishment numbers.

For the second sub-objective, we reviewed the Annual Reports' content to determine whether information required by statute was included. We examined the exhibit "Statutory Requirements for the Report" to determine what information the Agency used to meet the conditions of the statute. We communicated with various Headquarters officials to discuss the text and the Agency's interpretation of the requirements using January 1998 drafts of the Annual Reports. On July 23, 1998, we received and consequently reviewed the latest versions of the two Annual Reports.

Next, we addressed the third sub-objective by performing a partial review of internal controls over data entry procedures for the CERCLIS data system which supports compilation of the accomplishment information. We interviewed staff at Headquarters and in Regions 1 and 5 regarding controls over data entry. We performed reviews of policy documentation for entering and verifying data. We reviewed documentation discussing CERCLIS and its related systems which the Agency uses to capture Superfund information. Also, we discussed issues such as employee training and the coding of Superfund information for data entry.

Fourth, we determined whether EPA met its criteria for reporting Superfund site construction completions for fiscal years 1995 and 1996. Properly supported construction completions would be an indicator that the accomplishments under this category were reasonable and accurate. For this review, acceptable support consisted of preliminary or final close-out reports, no-further-action Records of Decision, or deletion notices. These are documents the Agency would sign to confirm that the criteria for a construction completion has been met. We reviewed earlier work performed in this area by Office of Inspector General staff. We then compared our listing of construction completions to related source documents and an Agency listing.

Finally, concerning the timeliness of the Annual Reports, we obtained documents regarding requests for data to prepare the Annual Reports, who the contributors were, and progress toward finalizing the reports. We also spoke with various Headquarters staff concerning methods for ensuring accuracy and timeliness of the Annual Reports.

We began our review on October 30, 1997, and completed field work on August 28, 1998.

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## Appendix E Summary of the Superfund Program [1995-1997]

The U.S. Environmental Protection Agency (EPA) is committed to accelerating the pace of hazardous waste site cleanup. As part of this commitment, EPA has placed 220 National Priorities List (NPL) sites into the construction completion category during FY95-FY97 for a total of 498 NPL sites in this category.

Throughout FY95-FY97, EPA successfully encouraged potentially responsible parties (PRPs) to undertake and finance cleanup efforts at Superfund sites. By the end of FY97, PRPs led more than 69 percent of remedial designs (RDs) and remedial actions (RAs) started during the fiscal year. During FY95-FY97, EPA continually improved the effectiveness of the Superfund program through the continuation of SACM, the implementation of administrative reforms and the brownfields initiative, reorganizing the Superfund program, and supporting reauthorization efforts with Congress.

#### **Superfund Accelerated Cleanup Model**

EPA's continued implementation of the Superfund Accelerated Cleanup Model (SACM) resulted in streamlining the cleanup process and changed the paradigm of doing business in Superfund. SACM allows for rapid reduction of risks at Superfund sites and long-term restoration of the environment. SACM introduced significant improvements to the existing cleanup process by:

 eliminating sequential and duplicative studies by combining site assessment and investigation activities;

- removing the existing overlap between the types of cleanup actions done under the Superfund removal program and those done under the remedial program, to save time and money; and
- redefining Superfund cleanup actions as early and long-term actions.

#### **Administrative Reforms**

EPA improved the effectiveness of the Superfund program by further refining initiatives and identifying administrative changes to be made within the existing statutory and regulatory framework. Three rounds of reforms have been launched, including the second round and third rounds, in FY95 and FY96, respectively. Each round of reforms brought about a number of new or enhanced initiatives and continued ongoing initiatives. Collectively, the initiatives involve diverse activities such as promotion of economic redevelopment, enforcement reform, environmental enhancement of community involvement, improvement of cleanup effectiveness and consistency, and expansion of the roles of states and Indian tribes. Examples of specific initiatives include:

#### Round 2

- testing the allocation process under which neutral parties allocate shares among responsible parties;
- providing relief to lenders by clarifying application of liability exemption;

- promoting economic redevelopment by archiving sites from CERCLIS determined to be of no further federal Superfund interest and awarding Brownfields pilots;
- reducing the cost and duration of cleanup through additional groundwater and land use guidances; and
- initiating a voluntary cleanup program to speed the cleanup of non-NPL sites.

#### Round 3

- compensating settlors for a portion of orphan shares, thereby reducing the responsibility of cooperative parties for shares attributable to insolvent parties;
- increasing the number of protected small contributors;
- reducing oversight of cooperative parties performing remedies and decreasing transaction costs;
- establishing a National Remedy Review Board to review proposed cleanup actions and help reduce cleanup costs;
- initiating remedy "Rules of Thumb" to produce time and cost savings;
- allowing economic redevelopment with the partial deletion of some sites; and
- fostering consistency among Regions for faster, fairer cleanups, reasonable risk assessments, and reduced PRP oversight.

#### Brownfields Initiative

EPA also promoted the redevelopment of abandoned and contaminated properties once used for industrial and commercial purposes ("brownfields"). EPA believes that environmental cleanup is a building block to economic redevelopment and must go hand-in-hand with bringing life and economic vitality back to communities.

The FY95 Brownfields Economic Redevelopment Initiative is a comprehensive approach to empower state and local governments, communities, and other stakeholders interested in economic redevelopment to work together in a timely manner to prevent, assess, safely cleanup, and sustainably reuse brownfields. In 1995, the General Accounting Office (GAO) estimated that there are 450,000 brownfields sites in the United States.

EPA addressed implementation of the initiative through the Brownfields Action Agenda and the subsequently established Brownfields National Partnership Action Agenda. The Agendas comprise a collection of bold strategies:

- implementing Brownfields pilot programs in cities, counties, towns, and Tribes across the country;
- clarifying liability and other issues of concern for lending institutions, municipalities, prospective purchasers, developers, property owners, and others;
- establishing partnerships with other EPA programs, federal agencies, states, cities, stockholders, and organizations;
- promoting community involvement by supporting job development and training activities linked to brownfield assessment, cleanup, and redevelopment; and
- linking environmental protection with economic redevelopment and community revitalization.

By the end of FY97, EPA had announced the selection of 121 Brownfields Pilots to be funded through cooperative agreements worth up to \$200,000 each for a two-year period. These pilots are either funded through Headquarters or the 10 Regional offices. The pilots are intended to provide redevelopment models, direct efforts toward removing regulatory barriers, and coordinate public and private efforts at the federal, state, and local levels.

#### **Superfund Program Reorganization**

EPA's Office of Emergency and Remedial Response (OERR) was reorganized in FY96 from a hierarchical, four division structure to a matrix organization with 14 centers of expertise. The reorganization had several distinct purposes:

- · to accelerate site cleanup;
- promote teamwork;
- empower states; and
- provide better customer service.

#### **Reauthorization Activities**

EPA continued to work with Congress on reauthorization issues. CERCLA was last amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA).

The major Superfund program areas include: Site Evaluation, Emergency Response, Remedial Progress, Enforcement Progress, Federal Facility Cleanups, Resource Estimates, and Superfund Program Support Activities.

#### Site Evaluation

Over FY95-FY97, EPA's progress in identifying and assessing newly discovered sites has resulted in a total of over 40,100 sites identified in the CERCLA Information System (CERCLIS). CERCLIS is Superfund's inventory of potentially threatening hazardous waste sites that require further federal Superfund program attention.

Through FY97, the Agency had begun work at over 98 percent of the 1,405 sites proposed to, listed on, or deleted from the NPL. Through the end of FY97, a total of 156 sites have been deleted from the NPL.

EPA carried on the implementation of SACM that encourages EPA Regions to reduce repetitive tasks and cost by combining certain site assessment, long-term remediation program, and removal program activities.

The NCP was modified so that CERCLIS sites needing no further EPA-financed response actions could be placed in a separate "archived" database. During FY95-FY97, EPA also proceeded with ongoing efforts to address technical complexities and improve site evaluation guidance.

During the 1995-1997 time period, EPA has undertaken projects to address brownfields issues by establishing the Brownfields Economic Redevelopment Initiative in FY95. This initiative is directed toward empowering states, local governments, communities, and others to work together to assess and safely cleanup brownfields sites.

#### **Emergency Response**

To protect human health and the environment from immediate or near-term threats, EPA and potentially responsible parties (PRPs) started nearly 830 removal actions and completed more than 889 removal actions during FY95-FY97. Through the end of FY97, more than 4,490 removal actions have been started and nearly 3,939 have been completed since the inception of the Superfund program.

The removal authority for "early actions," has been expanded to reduce immediate risks and expedite cleanup at NPL sites. The expansion was a key element of SACM. Early actions may include emergency, time-critical, or non-time critical removal responses or quick remedial responses.

Under the reportable quantities (RQ) regulatory requirements, EPA proposed an expanded exemptions rule (60 FR 40042) under which exemptions may be granted for releases of naturally occurring radionuclides associated with land disturbance due to certain mining activities.

EPA also issued guidance during FY96 that provides answers to common removals/RQ adjustment questions and concerns of the regulated community and general public. Additional guidance was completed on the removal response to radiation sites.

#### **Remedial Progress**

Accomplishments during FY95-FY97 reflect EPA's continued efforts to accelerate the overall pace of cleanup and complete cleanup activities at an increasing number of sites. During the period, cleanup activities resulted in the placement of 220 additional NPL sites in the construction completion category for an overall total of 498 NPL sites in this category. Also started by EPA or PRPs were nearly 107 remedial investigation/feasibility studies (RI/FSs), more than 230 remedial designs (RDs), and more than 328 remedial actions (RAs). EPA signed 492 records of decision (RODs) at Fund-financed or PRP-financed sites.

Two components of the remedial program with significant activity during FY95-FY97 were the fiveyear review program and the Superfund Innovative Technology Evaluation (SITE) Program. A total of 146 five-year reviews, required by CERCLA Section 121(c), were carried our during this period. These reviews assure that human health and the environment are being protected by the selected remedial action. The SITE Program demonstrates and evaluates full-scale, innovative hazardous waste treatment technologies. In FY96, the program shifted from a technology-driven focus to one that was more integrated, driven by the needs of the waste remediation community. EPA's technology transfer and interagency coordination efforts have long been recognized leaders in the technology innovation arena, and are continually enhanced through reference conferences, demonstrations, and publications.

### **Enforcement Progress**

Accomplishments during 1995-1997 reflect EPA's continuing commitment to maximizing PRP involvement in financing and conducting cleanup and recovery of Superfund monies expended for response actions. Over the three-year period, EPA has achieved enforcement agreements worth approximately \$2.2 billion in PRP response work. Through its cost recovery effort, EPA achieved approximately \$769 million in cost recovery settlements and collected more than \$822 million for reimbursement of Superfund expenditures in FY95-FY97. By the end of FY97, EPA had collected a

total of over \$1.7 billion in cost recovery settlements, bankruptcy settlements, fines and penalties.

EPA has been working toward improving the efficiency and fairness of Superfund enforcement. Transaction costs have been reduced through SACM, three rounds of administrative reforms, and promotion of an "enforcement first" initiative to secure increased PRP financial involvement. The reforms of FY95 encouraged *de minimis* settlements and de micromis settlements. Other approaches to promote fairness and flexibility in settlements were continued, and guidance documents were issued in FY95, detailing specific approaches to enforcement fairness.

#### **Federal Facility Cleanups**

Federal departments and agencies are largely responsible for implementing CERCLA at federal facility sites. To ensure federal facility compliance with CERCLA requirements, EPA provides advice and assistance, oversees activities, and takes enforcement action where appropriate. For sites that are on the NPL, EPA must concur with the selected remedy. The June 27, 1997 Federal Agency Hazardous Waste Compliance Docket listed a total of 2,104 federal facilities sites. Of the sites on the docket, 157 were proposed to or listed on the NPL, including 151 final and six proposed sites.

Throughout 1995-1997, the closure of military bases was an important issue. Major achievements in FY95 led EPA and the Department of Defense (DoD) to determine which installations to include in the Fast Track Cleanup Program of the Base Realignment and Closure Act (BRAC) in FY96. These actions allow for expedited cleanup and reuse of bases scheduled for closure. Several interagency forums were also held during this time span, allowing EPA to make significant progress in addressing further concerns associated with federal facility cleanup.

#### **Resource Estimates**

Under Executive Order 12580, EPA is required to estimate the resources needed to carry out Superfund program responsibilities assigned to EPA and other federal departments and agencies. Since

the enactment of CERCLA in 1980, Congress has provided Superfund with \$17.7 million in budget authority (FY81 through FY97).

Estimates of the long-term resources required to implement Superfund are based on the Outyear Liability Model (OLM). The OLM provides long-range forecasts, with flexibility to refine these forecasts, and can be adjusted to accommodate many program-related variables. To calculate a cost estimate, the OLM reviews active NPL sites, sites yet to begin the remedial process, non-site costs, and factors related to remedial action costs. The OLM cost estimate of completing cleanup of current NPL sites is more than \$13.6 billion for FY97 and beyond, bringing the total estimated cost of the program to \$31.3 billion.

#### Superfund Program Support

Throughout 1995-1997, EPA has taken measures to enhance support activities in the Superfund program. These steps include efforts to improve community relations, enhance public access to information, strengthen EPA's partnership with states and Indian tribes, and increase minority contractor utilization.

In its community involvement efforts, EPA tailors activities to the specific needs of individual communities and identifies ways to enhance community involvement efforts. EPA emphasized the importance of effective community involvement with guidance that encourages the Regions to establish community advisory groups (CAGs) in FY96. EPA also continued to provide technical outreach to communities, hold national conferences on community involvement, offer training and workshops, and facilitate community access to technical assistance grants (TAGs). communities in obtaining technical assistance, EPA awarded 46 TAGs during FY95-FY97, bringing the total number of TAGs awarded since FY88 to 198, for a total value of more than \$13 million.

To enhance public access to Superfund information, EPA continued its partnership with the National Technical Information Service (NTIS), to provide Superfund document distribution services. EPA has fulfilled requests for more than two million

documents free of charge through NTIS, aided by a broadened use of electronic tools (e.g. the Internet and multimedia computers) initiated in FY96. A Superfund Order Desk is also maintained where single copies of documents or customized subscriptions may be purchased.

Performance Partnership Grants (PPGs) or Cooperative Agreements (CAs) may be awarded to states or tribes by EPA to support state and tribal involvement in the Superfund response activities. More than \$20 million is awarded annually in Core Program Cooperative Agreements (CPCAs). These agreements make it easier for Regions to assist states and tribes in developing comprehensive Superfund programs.

To promote small and disadvantaged business participation in Superfund contracting, EPA directly and indirectly awards Superfund work contracts to minority contractors. Direct procurement involves any procurement activity where EPA is a direct party to a contractual arrangement for supplies, services or construction. Financial assistance programs utilize indirect procurement methods. Awards and/or CAs are granted to eligible states, local municipalities, universities, non-profit and commercial institutions, hospitals and individuals. Direct procurement contracts totaled nearly \$151.5 million during FY95-FY97, while cooperative and interagency agreements with minority contractors totaling more than \$3.1 million and nearly \$104 million, respectively. In addition, EPA's Office of Small and Disadvantaged Business Utilization (OSDBU) conducted a number of outreach activities during FY95-97, including seminars, conferences, and training sessions.

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